MODIFICATION HISTORY

MODEL NAME : MCM-21T2

SERVICE MANUAL

PARTS No. : 9-978-673-01

* Blue characters are linking.

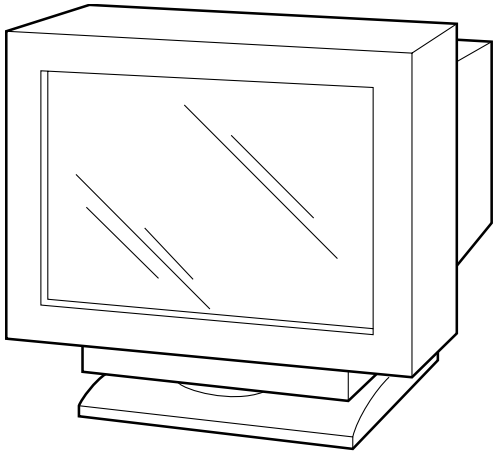
# No.	DATA	CONTENTS
#1	2000.3	Alteration of parts supply, as the service division had changed. (P.6-2)

MCM-21T2

SERVICE MANUAL

AEP Model

Chassis No. SCC-L22M-A



G1 CHASSIS

SPECIFICATIONS

CRT	0.24 mm aperture grille pitch 21 inches measured diagonally 90-degree deflection FD Trinitron
Viewable image size	Approx. 403.8 × 302.2 mm (w/h) (16 × 12 inches) 19.8" viewing image
Recommended resolution	Horizontal: 1600 dots Vertical: 1200 lines
Standard image area	Approx. 388 × 291 mm (w/h) (15 3/8 × 11 1/2 inches) or Approx. 364 × 291 mm (w/h) (14 3/8 × 11 1/2 inches)
Deflection frequency*	Horizontal: 30 to 121 kHz Vertical: 48 to 160 Hz
AC input voltage/current	100 to 240 V, 50 – 60 Hz, 2.0 – 1.0 A
Power consumption	Approx. 145 W
Dimensions	Approx. 498 × 491 × 478 mm (w/h/d) (19 5/8 × 19 3/8 × 18 7/8 inches)
Mass	Approx. 32 kg (70 lb 9 oz)
Plug and Play	DDC1/2B/2Bi, GTF**

* Recommended horizontal and vertical timing condition
- Horizontal sync width duty should be more than 4.8% of total horizontal time or 0.8 µs, whichever is larger.
- Horizontal blanking width should be more than 2.3 µsec.
- Vertical blanking width should be more than 450 µsec.

** If the input signal is Generalized Timing Formula (GTF) compliant, the GTF feature of the monitor will automatically provide an optimal image for the screen.

Design and specifications are subject to change without notice.

COLOR MONITOR

SIEMENS

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
8. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC Leakage. Check leakage as described below.

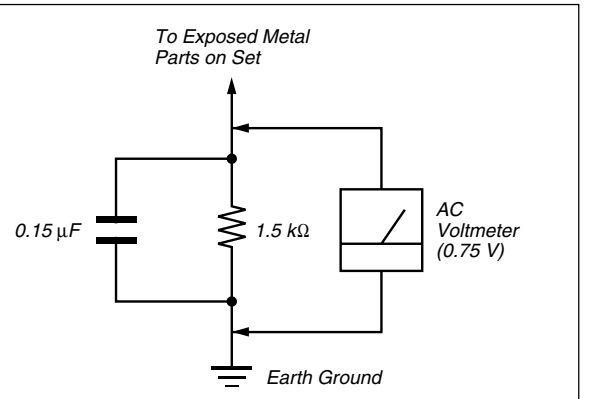
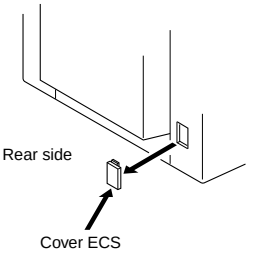


Fig. A. Using an AC voltmeter to check AC leakage.

CAUTION ON DAS (ECS) CONNECTOR

- The connector for DAS (ECS) adjustment is provided inside the cover shown below. Be careful with an electrical shock when connecting the connector with the power supplied. Also, return the removed cover to the home position.



LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes).

Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOMs that are suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

WARNING!!

NEVER TURN ON THE POWER IN A CONDITION IN WHICH THE DEGAUSS COIL HAS BEEN REMOVED.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

POWER SAVING FUNCTION

If your PC has a VESA DPMS (Video Electronics Standard Association, Display Power Management Signaling) power management function (energy-saving mode), your monitor will fully support this function. The monitor has a four-stage power management system.

Stage	ON	Standby mode	Suspend mode	OFF mode
Power indicator	glows green	flashes green/orange	flashes green/orange	glows orange
Function	Monitor operating normally	Monitor is dark	Monitor is dark	Monitor is dark
Power consumption	normal < 145 W	reduced to < 100 W	reduced to < 10 W	reduced to ≈ 1 W

If your PC detects inactivity (no input) it sends an appropriate signal to the monitor to reduce the power consumption. The power indicator of the monitor changes color to indicate the status change. If there is still no input, power consumption is further reduced (OFF mode).

Once an input is made at the PC the screen contents are redrawn and full power is restored.

The length of the individual stages is determined by the power management system of the PC. For detailed information on how energy-saving mode operates refer to the Operating Manual or Technical Manual of your PC.

i

The service life of your monitor will be extended if the OFF mode is switched to after 30 minutes at the earliest (setting in screen saver, in your PC's BIOS setup or in the OSD menu).
When the monitor is switched to OFF mode by the power management system a power consumption of about 1 W is maintained to feed the circuit for redrawing the screen contents.
To cut off power consumption totally, press the ON/OFF switch on the front of the monitor.

DIAGNOSIS

The monitor is equipped with a self-diagnosis function. If the monitor recognizes a fault, the screen display remains dark and the power indicator glows green or flashes orange.

The power indicator glows green

- ► Switch off the connected PC(s).
- ► Press and hold down the ➔ button on the front of the monitor for 2 seconds.

If all four color bars (white, red, green, blue) are shown, the monitor is operating properly. In this case, check the PC.

If the color bars do not appear, this may be due to a fault in the monitor. Please contact our customer service center with a description of the problem.

The power indicator flashes orange

- ► Switch the monitor off and on again.

If the power indicator continues to flash orange, there may be a fault in the monitor. Determine the interval at which the indicator flashes (in seconds) and contact our customer service center with a description of the problem.

TIMING SPECIFICATION

MODE AT PRODUCTION	MODE 1	MODE 2	MODE 3	MODE 4	MODE 5	MODE 6	MODE 7
RESOLUTION	720 X 400	640 X 480	800 X 600	800 X 600	1024 X 768	1024 X 768	1152 X 864
CLOCK	28.325 MHz	25.175 MHz	56.250 MHz	67.500 MHz	94.500 MHz	111.2 MHz	108.000 MHz
— HORIZONTAL —							
H-FREQ	31.472 kHz	31.469 kHz	53.674 kHz	63.920 kHz	68.677 kHz	80.814 kHz	67.500 kHz
	usec	usec	usec	usec	usec	usec	usec
H. TOTAL	31.774	31.778	18.631	15.644	14.561	12.374	14.815
H. BLK	6.355	6.356	4.409	3.793	3.725	3.165	4.148
H. FP	0.635	0.636	0.569	0.474	0.508	0.288	0.593
H. SYNC	3.813	3.813	1.138	0.948	1.016	1.151	1.185
H. BP	1.906	1.907	2.702	2.370	2.201	1.727	2.370
H. ACTIV	31.774	25.422	14.222	11.852	10.836	9.209	10.667
— VERTICAL —							
V. FREQ (HZ)	70.094 Hz	59.940 Hz	85.061 Hz	100.032 Hz	84.997 Hz	99.894 Hz	75.0 Hz
	lines	lines	lines	lines	lines	lines	lines
V. TOTAL	449	525	631	639	808	809	900
V. BLK	49	45	31	39	40	41	36
V. FP	13	10	1	1	1	2	1
V. SYNC	2	2	3	3	3	3	3
V. BP	34	33	27	35	36	36	32
V. ACTIV	400	480	600	600	768	768	864
— SYNC —							
INT(G)	NO	NO	NO	NO	NO	NO	NO
EXT (H/V) /POLARITY	YES N/P	YES N/N	YES P/P	YES P/P	YES P/P	YES N/N	YES P/P
EXT (CS) /POLARITY	NO	NO	NO	NO	NO	NO	NO
INT/NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT

MODE AT PRODUCTION	MODE 8	MODE 9	MODE 10	MODE 11	MODE 12	MODE 13	MODE 14
RESOLUTION	1152 X 864	1280 X 1024	1280 X 1024	1600 X 1200	1600 X 1200	1856 X 1392	1920 X 1440
CLOCK	172.000 MHz	157.500 MHz	184.900 MHz	229.500 MHz	270.0 MHz	288.00 MHz	297.000 MHz
— HORIZONTAL —							
H-FREQ	109.694 kHz	91.146 kHz	107.002 kHz	106.250 kHz	118.838 kHz	112.50 kHz	112.500 kHz
	usec	usec	usec	usec	usec	usec	usec
H. TOTAL	9.116	10.971	9.346	9.412	8.415	8.889	8.889
H. BLK	2.419	2.844	2.423	2.440	2.489	2.444	2.424
H. FP	0.186	0.406	0.173	0.279	0.237	0.444	0.485
H. SYNC	0.744	1.016	0.692	0.837	0.830	0.778	0.754
H. BP	1.488	1.422	1.558	1.325	1.422	1.222	1.185
H. ACTIV	6.698	8.127	6.923	6.972	5.926	6.444	6.465
— VERTICAL —							
V. FREQ (HZ)	120.015 Hz	85.024 Hz	99.91 Hz	85.000 Hz	94.692 Hz	75.00 Hz	75.000 Hz
	lines	lines	lines	lines	lines	lines	lines
V. TOTAL	914	1072	1071	1250	1255	1500	1500
V. BLK	50	48	47	50	55	108	60
V. FP	2	1	2	1	2	1	1
V. SYNC	3	3	3	3	3	3	3
V. BP	45	44	42	46	50	104	56
V. ACTIV	864	1024	1024	1200	1200	1392	1440
— SYNC —							
INT(G)	NO	NO	NO	NO	NO	NO	NO
EXT (H/V) /POLARITY	YES N/N	YES P/P	YES P/P	YES P/P	YES N/P	YES N/P	YES N/P
EXT (CS) /POLARITY	NO	NO	NO	NO	NO	NO	NO
INT/NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT

2000.2.8 VER.

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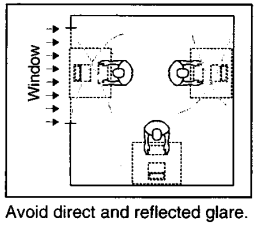
Note: Hand degauss must be used on stand-by or power-off condition.
This model has an automatic earth magnetism correction function by using an earth magnetism sensor and a LCC coil. When using a hand degauss while monitor (LCC coil) is being operated, it sometimes gets magnetized, and the system may not work properly as a result.

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

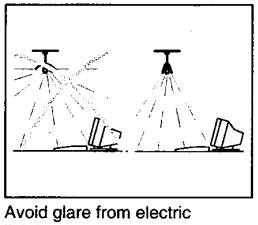
SECTION 1
GENERAL

Installing an ergonomic video workstation

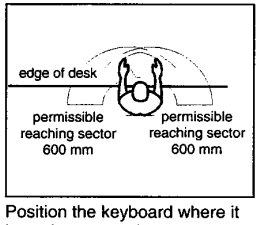
Before you set up your equipment you should select a suitable position for working at the monitor. Please observe the following advices when installing a video workstation.



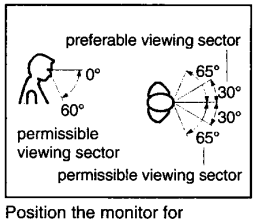
Avoid direct and reflected glare.



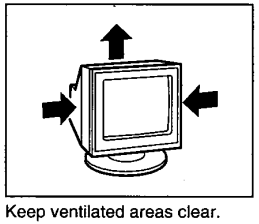
Avoid glare from electric lighting.



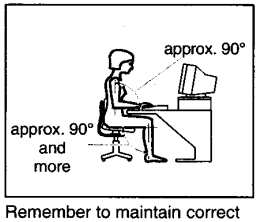
Position the keyboard where it is easiest to reach.



Position the monitor for optimum viewing. The viewing distance to the monitor should be approximately 50 cm.



Keep ventilated areas clear.



Remember to maintain correct posture.

Connecting the monitor

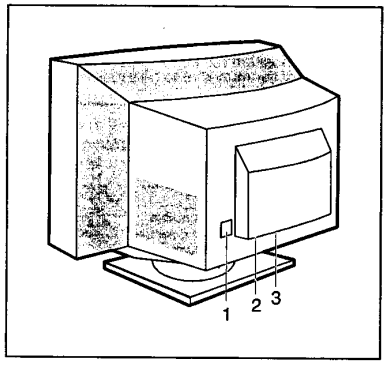
See your PC's operating manual for details of the ports on the system unit.

Please note the information provided in the "Safety" section in the chapter "Important notes" at the beginning of this manual.

Do not cover the ventilation openings of the monitor.

If you are assembling monitors beside each other, there must be a minimum distance of 30 cm between monitors of the same constructional type, to avoid image distortion. With different monitors, the distance must be increased, if necessary.

Because of its weight, the monitor must be placed on a stable surface. Do not place the monitor on your system unit.



1 = Power connector
2 = D-SUB connector INPUT1
3 = D-SUB connector INPUT2

The monitor has two monitor ports, INPUT1 and INPUT2. This makes it possible to connect the monitor to two system units simultaneously. For connection to a second system unit, you require and additional data cable.

If two system units are connected and switched on, you can select the current monitor port using the INPUT switch on the front of the system.

- Be sure that the monitor and the system unit are switched off.

The system unit's power plug must be pulled out!

The data cable supplied has two 15-pin D-SUB connectors for connection to the monitor and to the system unit.

CE conformance and optimum picture quality are guaranteed only if you use the data cable supplied.

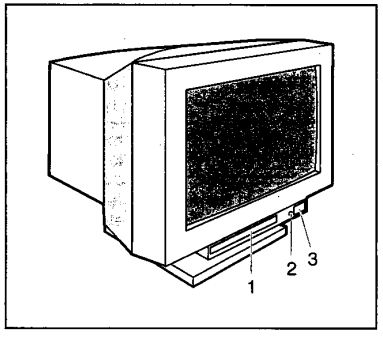
- Connect a connector of the data cable to the monitor port INPUT1 (2) on the monitor and secure the plug-in connection by tightening the safety screws.
- Connect the other connector of the data cable to the (active) monitor port on the system unit and secure the plug-in connection by tightening the safety screws.

If your system unit has two monitor ports ("onboard" screen controller and separate graphics card), the monitor port for the separate graphics card is usually active.

- Plug the power cable supplied into the power connector (1) of the monitor.
- Plug the power connector of the monitor into a properly grounded power outlet.
- Plug the power connector of the system unit into a properly grounded power outlet.

When you start working with your monitor for the first time you should install the appropriate graphics drivers for your application software. Details of how to do this are provided in the documentation on your screen controller/the associated driver software.

Operation of the monitor



1 = Control panel with buttons for screen setting
2 = Power indicator
3 = ON/OFF switch

Switching the monitor on

► Press the ON/OFF switch (3).

The power indicator (2) lights up green when the system unit is turned on.

If your PC has a power management function (energy-saving mode), you should read the "Notes on power management" of the monitor in this chapter.

When you start your system, several mode changes will usually be carried out when various programs are called automatically (different settings for resolution and image refresh rate). Do not be confused by the unusual displays. They are not error messages.

Switching the monitor off

► Press the ON/OFF switch (3).

The power indicator (2) is dark.

Notes on power management

If your PC has a VESA DPMS (Video Electronics Standard Association, Display Power Management Signaling) power management function (energy-saving mode), your monitor will fully support this function. The monitor has a four-stage power management system.

Stage	ON	Standby mode	Suspend mode	OFF mode
Power indicator	glows green	flashes green/orange	flashes green/orange	glows orange
Function	Monitor operating normally	Monitor is dark	Monitor is dark	Monitor is dark
Power consumption	normal < 145 W	reduced to < 100 W	reduced to < 10 W	reduced to ≈ 1 W

If your PC detects inactivity (no input) it sends an appropriate signal to the monitor to reduce the power consumption. The power indicator of the monitor changes color to indicate the status change. If there is still no input, power consumption is further reduced (OFF mode).

Once an input is made at the PC the screen contents are redrawn and full power is restored.

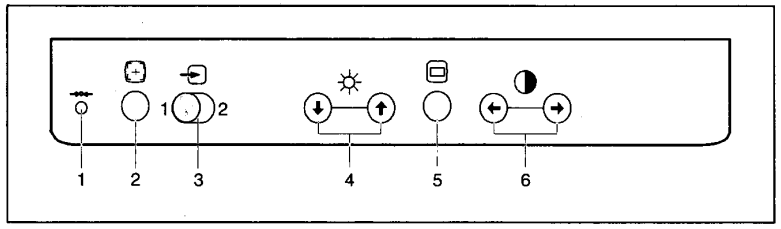
The length of the individual stages is determined by the power management system of the PC. For detailed information on how energy-saving mode operates refer to the Operating Manual or Technical Manual of your PC.

The service life of your monitor will be extended if the OFF mode is switched to after 30 minutes at the earliest (setting in screen saver, in your PC's BIOS setup or in the OSD menu).
When the monitor is switched to OFF mode by the power management system a power consumption of about 1 W is maintained to feed the circuit for redrawing the screen contents.
To cut off power consumption totally, press the ON/OFF switch on the front of the monitor.

Changing the monitor settings

With the buttons on the control panel, you can change the monitor settings. Most settings are carried out via an integrated OSD menu (On-Screen Display).

i The OSD menu is available in different languages. The English menu names are used in the following description (default setting). How you set a different language for the OSD menu is described in the section "Setting the language for the OSD menu (LANGUAGE)".



1 = Factory settings button
2 = Picture size/position button (automatic setting)
3 = INPUT switch
4 = Brightness/arrow up/down button
5 = Menu button
6 = Contrast/arrow left/right button

The factory settings button (1) is used to reset the values to the factory settings.

With the picture size/position button (2) the screen display can be automatically adjusted so that it fits on the screen. This function is especially intended for computers with graphic user interfaces (software) which fills the entire screen.

The INPUT switch (3) enables you to select the current monitor port:
Switch in position 1 = monitor port INPUT 1
Switch in position 2 = monitor port INPUT 2

The brightness/arrow up/down buttons (4) are used to set the brightness and to operate the OSD menu.

The menu button (5) switches the OSD menu on and off.

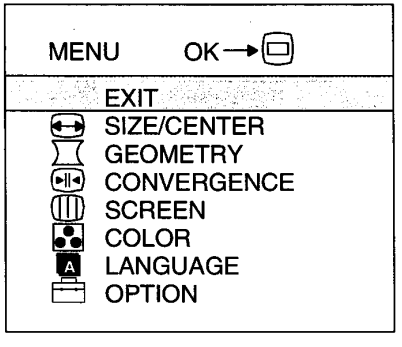
The contrast/arrow left/right buttons (6) are used to set the contrast and to operate the OSD menu.

Operating the OSD menu

To set the OSD menu, perform the following steps:

► Briefly press the Menu button to activate the OSD menu.

The main menu appears on the screen with icons for the setting functions.



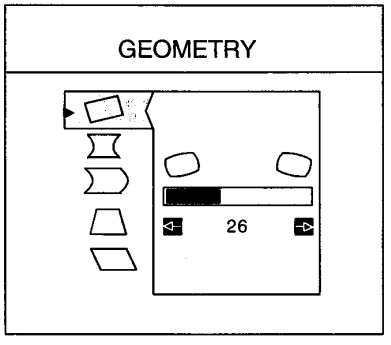
► Select the desired symbol with the arrow buttons and , e. g. *GEOMETRY.*

(If you wish to exit the OSD menu, select *EXIT.*)

The selected symbol has a colored marking.

► Press the Menu button to display the appropriate options window.

Depending on what options window is involved (here: *GEOMETRY.*), further icons are offered.



► If necessary, select a different symbol with the arrow buttons .

► Make the required setting using the arrow buttons .

All changes are stored automatically.

The OSD menu disappears after approx. 30 seconds. The OSD menu can be hidden beforehand by pressing the menu button (possibly several times).

Adjusting the contrast and brightness

The contrast and brightness can be adjusted directly with the arrow buttons and of the control panel when the OSD menu is hidden. The set values are saved for all input signals.

i You will increase the life of your screen if you adjust the contrast and brightness to medium.

In the setting window for contrast and brightness, the horizontal frequency and refresh rate of the current input signal are displayed as additional information.

	Setting the brightness of the background
	Setting the contrast between the foreground and background

Setting picture position and size (SIZE/CENTER)

The set values for the picture position and size are only saved for the current input signal.

	Calling the *SIZE/CENTER* setting window
	Horizontal picture size (*H SIZE*): Making the picture narrower or wider
	Vertical picture size (*V SIZE*): Making the picture shorter or longer
	Horizontal picture position (*H CENTER*): Shifting the picture to the left or to the right
	Vertical picture position (*V CENTER*): Shifting the picture down or up
	Proportional picture size (*ZOOM*): Increasing or reducing picture size while retaining the side ratios The picture zoom adjustment will stop as soon as either the horizontal or vertical size reaches its maximum or minimum value.

Setting the picture geometry (GEOMETRY)

Tilt distortion must be set when the screen display is not axially symmetrical.

Pincushion distortion is when the sides of the screen display are bent inward or outward. Trapezoid distortion is when the top or bottom of the screen display is too wide or too narrow. Parallelogram distortion means that the sides of the picture bend to the left or right.

The set value for the picture rotation is saved for all input signals. All other values of the picture geometry are only saved for the current input signal.

	Calling the *GEOMETRY* options window
	Picture rotation (*ROTATION*): Rotating the picture in a clockwise or counter-clockwise direction
	Vertical pincushion distortion (*PINCUSHION*): Bending the right and left side inward or outward
	Asymmetrical pincushion distortion (*PIN BALANCE*): adjusting right and left side symmetrically

	Trapezoid distortion (*KEYSTONE*): Making the bottom edge narrower and the top edge wider or making the top edge narrower and the bottom edge wider
	Parallelogram distortion (*KEY BALANCE*): Reducing the angle of the left and right sides

Setting convergence (CONVERGENCE)

If objects on the screen have red or blue shadows, the vertical or horizontal convergence of the monitor is incorrectly adjusted.

	Calling the *CONVERGENCE* setting window
	Horizontal convergence (*H CONVERGENCE*): Shifting red and blue shadows to the right/to the left
	Vertical convergence (*V CONVERGENCE*): Shifting red and blue shadows up or down
	Vertical convergence in the upper display area (*CONVER TOP*): Shifting red and blue shadows up or down
	Vertical convergence in the lower display area (*CONVER BOTTOM*): Shifting red and blue shadows up or down

Correcting picture problems (SCREEN)

If the picture you see on screen has light and dark stripes or appears dull and blurred, this may be due to what is known as the moiré effect. This effect usually has physical causes, being triggered by interference between the pixels in the matrix and the video signal. The intensity of the moiré effect is dependent on the screen resolution and horizontal frequency.

Set the picture size, brightness, etc. before you switch on moiré correction.

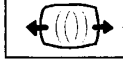
Only switch moiré correction on if you can see light and dark stripes on your screen, or if the picture is dull and blurred.

In some cases, moiré correction may cause the picture quality to deteriorate (reduced picture definition, slight flickering.)

If color impurities result at the four corners of the screen due to the geomagnetism, these can be corrected by setting the color purity.

The set value for the Moiré correction is only saved for the current input signal. All other picture correction values are saved for all input signals.

	Calling the *SCREEN* setting window
	Color purity (*LANDING*): Correcting the color purity in the upper left-hand corner of the screen

	Color purity (*LANDING*): Correcting the color purity in the upper right-hand corner of the screen
	Color purity (*LANDING*): Correcting the color purity in the lower left-hand corner of the screen
	Color purity (*LANDING*): Correcting the color purity in the lower right-hand corner of the screen
	Switching Moiré correction on and off (*CANCEL MOIRE*) To set the degree of Moiré correction, the function must be switched on (*ON*).
	Setting degree of Moiré correction (*MOIRE ADJUST*)

Setting color temperature and colors (COLOR)

The "warmth" of the screen colors is set using the color temperature. The monitor has three fixed color temperatures (K = Kelvin). In addition, a user-defined fine calibration of the colors can also be carried out.

If you have reached the maximum value for one of the primary colors (red, green, blue), this will affect the settings for the other primary colors.

The set value for the color setting is saved for all input signals.

	Calling the *COLOR* setting window
EASY	*5000K* = Selecting color temperature 5000 K (more red) *6500K* = Selecting color temperature 6500 K *9300K* = Selecting color temperature 9300 K (more blue) You can use any of the preset color temperatures as a starting point for user-defined fine tuning of the colors.
EXPERT	Setting black levels (levels at low luminosity) and white levels (levels at maximum luminosity) for the color signals *R BIAS* = Setting black level for red *G BIAS* = Setting black level for green *G BIAS* = Setting black level for blue *R GAIN* = Setting white level for red *G GAIN* = Setting white level for green *B GAIN* = Setting white level for blue
sRGB	Setting the sRGB color mode Your PC and other connected devices (such as a printer) must be sRGB compliant. The sRGB color mode is an industry standard protocol designed to correlate the displayed and printed colors of sRGB compliant devices. In order to display the sRGB colors correctly (γ = 2.2; 6500 K), you must set your PC to the sRGB profile and adjust the brightness and contrast to the values shown in the menu.

	Restore original monitor colors (*EASY* and *sRGB*: *COLOR RETURN*) After a number of years of operation the color brightness of your monitor may decrease slowly. With this function you can reset the monitor colors to manufacturer's default values. (Due to the natural aging process this function may no longer work after a certain period of time.) Prior to being able to use this function, the monitor must have been in standard operation for at least 30 minutes (power indicator is green). If the monitor changes over into energy saving mode, switch it back to normal mode and wait for 30 minutes. You may have to change the energy saving settings of your computer in order to keep the monitor in standard operating setting for 30 minutes. If the monitor is not ready, a respective message will appear. Press the button ◑ ➡. While the original screen colors are being restored the screen remains dark. This process takes about 2 seconds.

Setting language for the OSD menu (LANGUAGE)

	Setting language for the OSD menu You can choose from English (default setting), German, French, Spanish, Italian, Swedish, Dutch, Russian and Japanese.

Setting monitor options (OPTION)

With the options in the setting window *OPTION* the monitor can be degaussed, the position for the OSD menu changed, a delay time for the energy-saving mode set and the buttons for monitor adjustment locked/unlocked.

The set values are independent of a change in the input signal.

	Calling the *OPTION* setting window
	Degaussing the monitor (*MANUAL DEGAUSS*) The monitor is degaussed every time you switch it on. When color shifts occur in the screen display due to the influence of magnetic fields, the screen must be degaussed manually. Press the button ➡. The monitor is degaussed for approximately 3 seconds. If the monitor is to be degaussed a second time, please wait approximately 20 minutes before executing the function again.
	Setting horizontal position of the OSD menu (*OSD H POSITION*) You can change the OSD position, for example, when you want to adjust the picture behind an OSD window.
	Setting vertical position of the OSD menu (*OSD V POSITION*) You can change the OSD position, for example, when you want to adjust the picture behind an OSD window.

ZZ...	Setting the power management delay time (*PWR SAVE DELAY*) A delay time can be selected after which the monitor switches into the energy-saving mode (*5 SEC, 1 MIN, 60 MIN, OFF*), if it has received the corresponding signal from the PC. The service life of your monitor will be extended if the OFF mode is switched to after 30 minutes at the earliest. Additional information on the energy-saving mode is contained in the section "Notes on power management" in this chapter.
	Lock/unlock buttons for adjusting the monitor (*CONTROL LOCK*) With this option all buttons on the front of the monitor (with the exception of the menu button and the on/off switch) can be locked and unlocked again. *OFF* = unlocked *ON* = locked If *ON* has been selected, only the symbols *OPTION* or *EXIT* can be selected in the main menu. If - with the OSD menu hidden - a button other than the menu button or the on/off switch is pressed, the key symbol appears on the screen.

Activating the factory settings

With the factory settings button on the front of the monitor, either the adjustment of a selected function can be specifically reset to the factory setting, all settings for the current input signal can be reset or all input signals reset.

Resetting a selected function to the factory setting

- ► Select the function in the OSD menu to be reset.
- ► Press the factory settings button .

Resetting all settings for the current input signal

- ► Press - with the OSD menu hidden - the factory settings button .

All settings for the current input signal are reset.

i With this method those settings are not reset which are not influenced by a change in the input signal (language and position of the OSD menu, color setting, locking of the buttons for monitor adjustment).

Resetting all settings for all input signals

- ► Press and hold down the factory settings button - with the OSD menu hidden - for at least 2 seconds.

All settings including brightness and contrast are reset to the factory values.

Notes on ergonomic color adjustment

If you select colors for the display in your application programs, take note of the information below. The primary colors blue and red on a dark background do not produce the minimum required contrast of 3:1 and are therefore not suitable for continuous text and data entry.

When using several colors for characters and background and giving the primary colors full modulation, you can obtain very suitable color combinations (see the following table):

Background	Characters							
	black	white	purple	blue	cyan	green	yellow	red
black		+	+	-	+	+	+	-
white	+		+	+	-	-	-	+
purple	+	+		-	-	-	-	-
blue	-	+	-		+	-	+	-
cyan	+	-	-	+		-	-	-
green	+	-	-	+	-		-	-
yellow	+	-	+	+	-	-		+
red	-	+	-	-	-	-	+	

\+ Color combination very suitable; light background colors are only suitable for devices which are operated with a refresh rate of at least 75 Hz.

\- Color combination not suitable because color locations are too close together, thin characters are not identifiable or rigorous focusing is demanded of the human eye.

Technical data

Dimensions and weight

CRT:	50 cm (21")
Visible diagonals:	50 cm
Dot pitch:	0.24 mm (slot mask)
Maximal resolution:	1920 x 1440 pixels
Preset display area:	388 mm x 291 mm
Dimensions (W x H x D):	498 mm x 491 mm x 478 mm
Weight:	32 kg
Accessories:	Power cable (1.8 m) data cable (1.8 m)
Storable display modes:	25 (10 of which are preset)

Electrical data

Video:	analog, positive, 0.7 V_{pp}, 75 Ohm
Synchronization:	Separate Sync. TTL Composite Sync. TTL/ Sync. on Green
Horizontal frequency:	30 kHz .... 121 kHz (multi-scanning)
Refresh rate:	48 Hz .... 160 Hz
Maximum pixel rate:	300 MHz
Power supply:	switches automatically 90 V -132 V, 50 Hz - 60 Hz ±3 Hz, <2 A typ. at 110 V 180 V - 264 V, 50 Hz - 60 Hz ± 3 Hz, < 1 A typ. at 220 V
Power consumption: (see power management):	< 145 W (ON, Normal mode) < 100 W (Standby mode) < 10 W (Suspend mode) ≈ 1 W (OFF mode)

Environmental conditions

Environment class 3K2, IEC 721

Rated range of operation: Humidity:	15 °C .... 35 °C 20 % .... 85 %
Limit range of operation: Humidity:	5 °C .... 40 °C 20 % .... 85 %

Condensation must be avoided.

VESA-DDC-compatible VGA interface

Your monitor is equipped with a VESA-DDC-compatible VGA interface. VESA-DDC (Video Electronics Standard Association, Display Data Channel) is used as the communications interface between the monitor and the PC. If your PC is equipped with a VESA-DDC-compatible VGA interface, it can automatically read the data for ensuring optimum operation from your monitor and select the appropriate settings.

i If the monitor MCM 21T2 is not yet displayed in the list of monitors, you can select one of the following monitors instead:

Siemens or Siemens Nixdorf MCM 2110, MCM 21T1, MCM 211V

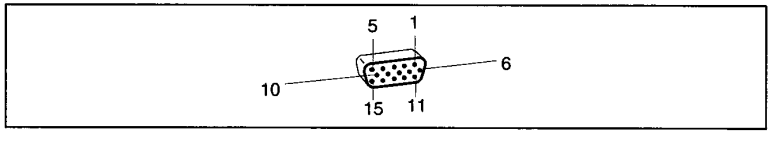
Preset operating modes

i The display position and size have been set to optimum values at the factory for the operating modes listed above. Depending on the screen controller used, it may be necessary to adjust the display position and size. In this case, you can change and save the settings (see "Operation of the monitor").

Horizontal frequency	Refresh rate	Screen resolution
31.5 kHz ±0.5 %	70 Hz ± 0.5 %	720 x 400
31.5 kHz ±0.5 %	60 Hz ± 0.5 %	640 x 480
63.0 kHz ±0.5 %	100 Hz ± 0.5 %	800 x 600
68.7 kHz ±0.5 %	85 Hz ± 0.5 %	1024 x 768
77.47 kHz ±0.5 %	75 Hz ± 0.5 %	1152 x 864
97.47 kHz ±0.5 %	100 Hz ± 0.5 %	1024 x 768
109.69 kHz ±0.5 %	120 Hz ± 0.5 %	1152 x 864
91.1 kHz ±0.5 %	85 Hz ± 0.5 %	1280 x 1024
107.0 kHz ±0.5 %	100 Hz ± 0.5 %	1280 x 1024
106.8 kHz ±0.5 %	85 Hz ± 0.5 %	1600 x 1200

For ergonomic reasons we recommend a refresh rate of at least 75 Hz and a maximum resolution of 1024 x 1280 pixels.

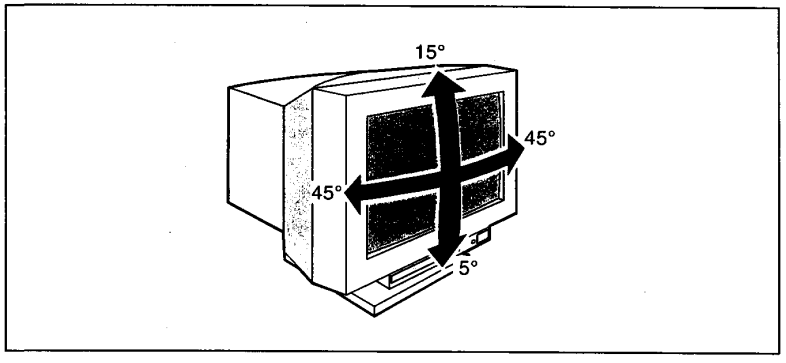
Pin assignment D-SUB (15-pin)



Pin	Meaning
1	Video input red
2	Video input green / Sync. on green
3	Video input blue
4	Monitor ground
5	DDC ground
6	Red video ground
7	Green video ground
8	Blue video ground

Pin	Meaning
9	+ 5 V
10	Logic ground
11	Monitor ground
12	Bi-directional Data (SDA)
13	H. sync
14	V. sync
15	Data Clock (SCL)

Tilting and turning area



Error handling

Should an error occur, first check the following points. If the distortion is still not eliminated, the monitor should, if possible, be checked with another data cable and on another PC.

Self-diagnosis

The monitor is equipped with a self-diagnosis function. If the monitor recognizes a fault, the screen display remains dark and the power indicator glows green or flashes orange.

The power indicator glows green

- ► Switch off the connected PC(s).
- ► Press and hold down the ➡ button on the front of the monitor for 2 seconds.

If all four color bars (white, red, green, blue) are shown, the monitor is operating properly. In this case, check the PC.

If the color bars do not appear, this may be due to a fault in the monitor. Please contact our customer service center with a description of the problem.

The power indicator flashes orange

- ► Switch the monitor off and on again.

If the power indicator continues to flash orange, there may be a fault in the monitor. Determine the interval at which the indicator flashes (in seconds) and contact our customer service center with a description of the problem.

Possible malfunctions

If you cannot solve the problem, contact our customer service center.

The screen is blank (power indicator does not light)

- ► Check whether the monitor is switched on.
- ► Check whether the power cable on the monitor is connected correctly.
- ► Check whether the mains socket is live.

The screen is blank (power indicator lights)

- ► Check whether the system unit is switched on.
- ► Check whether the data cable for the monitor is correctly attached to the monitor and the monitor port on the system unit.
- ► Check whether the monitor connection of the system unit used is active.
- ► Press any key on the PC keyboard - the PC may be in energy saving mode.
- ► Change the brightness and/or the contrast; the monitor may be adjusted to the maximum dark setting.

Two fine horizontal lines (wires) are visible

i Your monitor is equipped with a Trinitron picture tube, which enables more light to reach the screen with a vertical slot mask, and therefore produces more intense colors. The thin lines visible with a white background are shadows of the damper wires, which stabilize the vertical slot mask. They are characteristic of picture tubes with a vertical slot mask. There is no malfunction.

The screen display is too small or not centered

The monitor recognizes an undefined mode (see "Technical data").

i To display the current mode (horizontal frequency and refresh rate), press the ↓ ☼ ↑ or ← ◑ → buttons.

- ► Press the picture size/position button ⊡ to automatically adjust the screen display.
- ► Correctly adjust the picture size and position with the OSD menu (see "Operation of the monitor", section "Setting picture position and size (SIZE/CENTER)").

Picture geometry is defective

- ► Correctly adjust the picture geometry with the OSD menu (see "Operation of the monitor", section "Setting picture geometry (GEOMETRY)").

Colors are impure or shifted

- ► Degauss the monitor (see "Operation of the monitor", section "Setting monitor options (OPTION)").
- ► Set the color purity (see "Operation of the monitor", section "Correcting picture problems (SCREEN)").

- Set the convergence (see "Operation of the monitor", section "Setting convergence (CONVERGENCE)").

White does not look white

- Set the color temperature (see "Operation of the monitor", section "Setting color temperature and colors (COLOR)").

Screen display has lines, is dull or blurred

- Set the brightness and contrast (see "Operation of the monitor").
- Degauss the monitor (see "Operation of the monitor", section "Setting monitor options (OPTION)").
- Set the convergence and reduce the Moiré correction (see "Operation of the monitor", section "Correcting picture problems (SCREEN)").

The screen display is flickering

- Set an ergonomic refresh rate (≥ 75 Hz) using the PC software (see documentation for your PC or your screen controller/graphics card).

Monitor adjustment buttons do not react

The buttons have probably been locked with the OSD menu.

- Unlock the monitor adjustment buttons (see "Operation of the monitor", section "Setting monitor options (OPTION)").

A humming noise is heard after switch-on

The monitor is degaussed every time you switch it on. This produces the humming noise. There is no malfunction.

Error messages on the screen

```
OUT OF SCAN RANGE
INPUT: 1/2
```

The input signal (horizontal frequency and refresh rate) at the displayed input does not correspond to the technical monitor data.

- Adjust the video frequency range using the PC software (see documentation for your PC or your screen controller/graphics card).

```
NO INPUT SIGNAL
INPUT: 1/2
```

The monitor does not recognize an input signal at the displayed input.

- Check whether the (corresponding) system unit is switched on.
- Check whether the data cable for the monitor is correctly attached to the monitor and the monitor port on the system unit.
- Check whether the power cable on the system unit is connected to a power outlet with earthing contact.

Declaration of Conformity

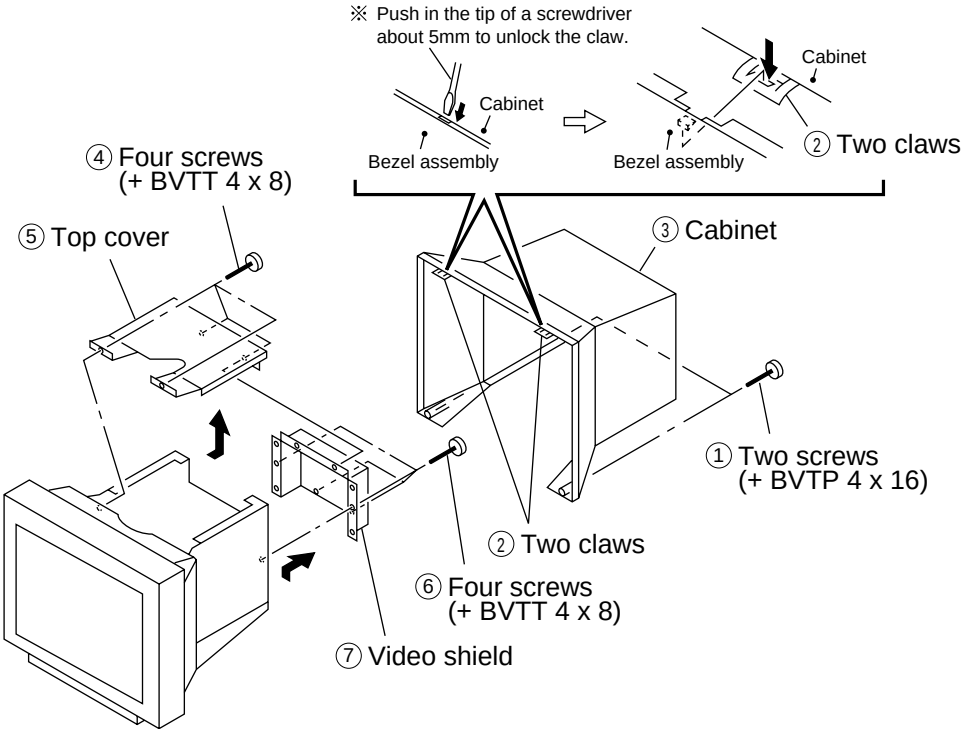
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Product Name:	Color Monitor
Trade Name:	Fujitsu Siemens Computers
Model Number(s):	MCM 21T2
Name of Responsible Party:	Siemens Information and Communication Products LLC 3860 N. First Street San Jose, CA 95134-1702 U.S.A.
Contact Person:	Mike Fitzner
Phone No.:	(408) 428-8918
Fax No.:	(408) 428-7290

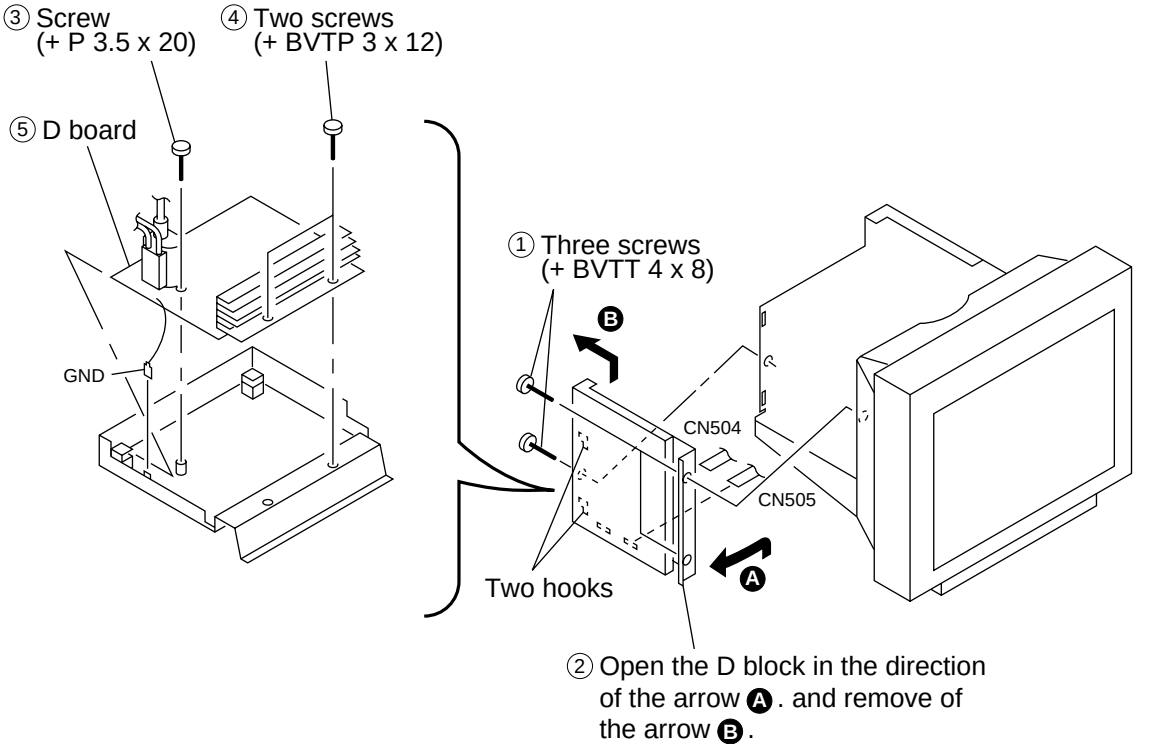
We, Siemens Information and Communication Products LLC, hereby declare that the equipment bearing the trade name and model number specified above was tested confirming to the applicable FCC Rules under the most accurate measurement standards possible, and that all the necessary steps have been taken and are in force to assure that production units of the same equipment will continue to comply with the Commissions requirements.

SECTION 2
DISASSEMBLY

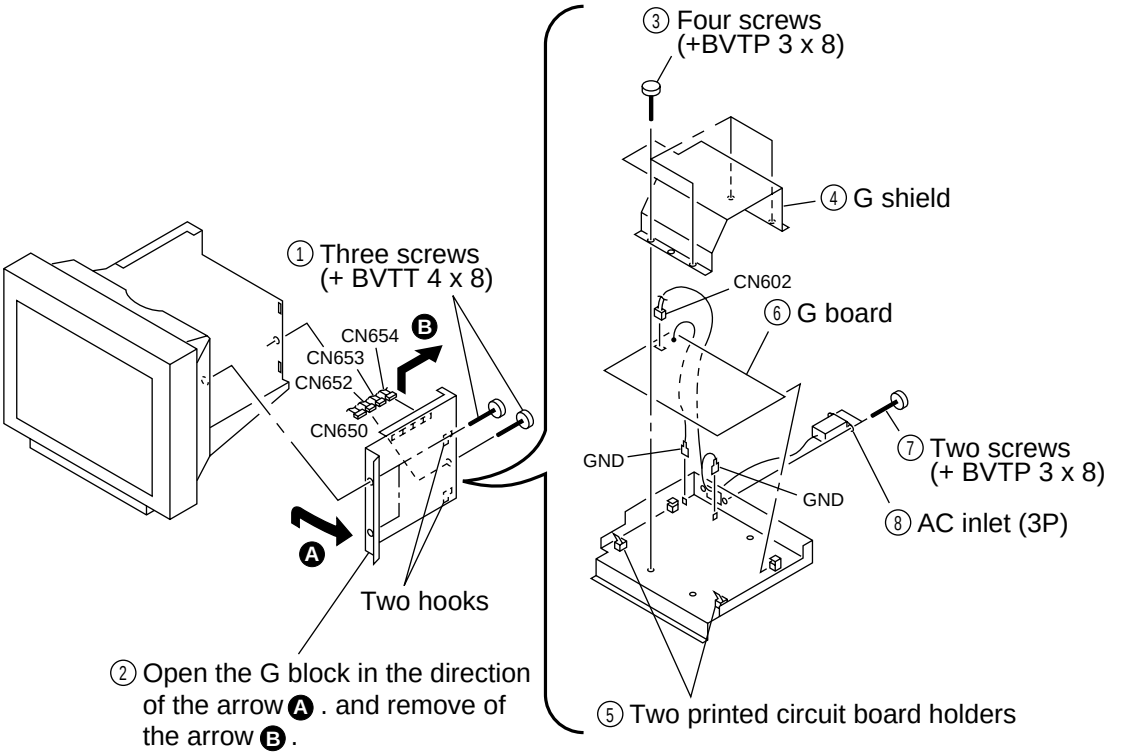
2-1. CABINET REMOVAL



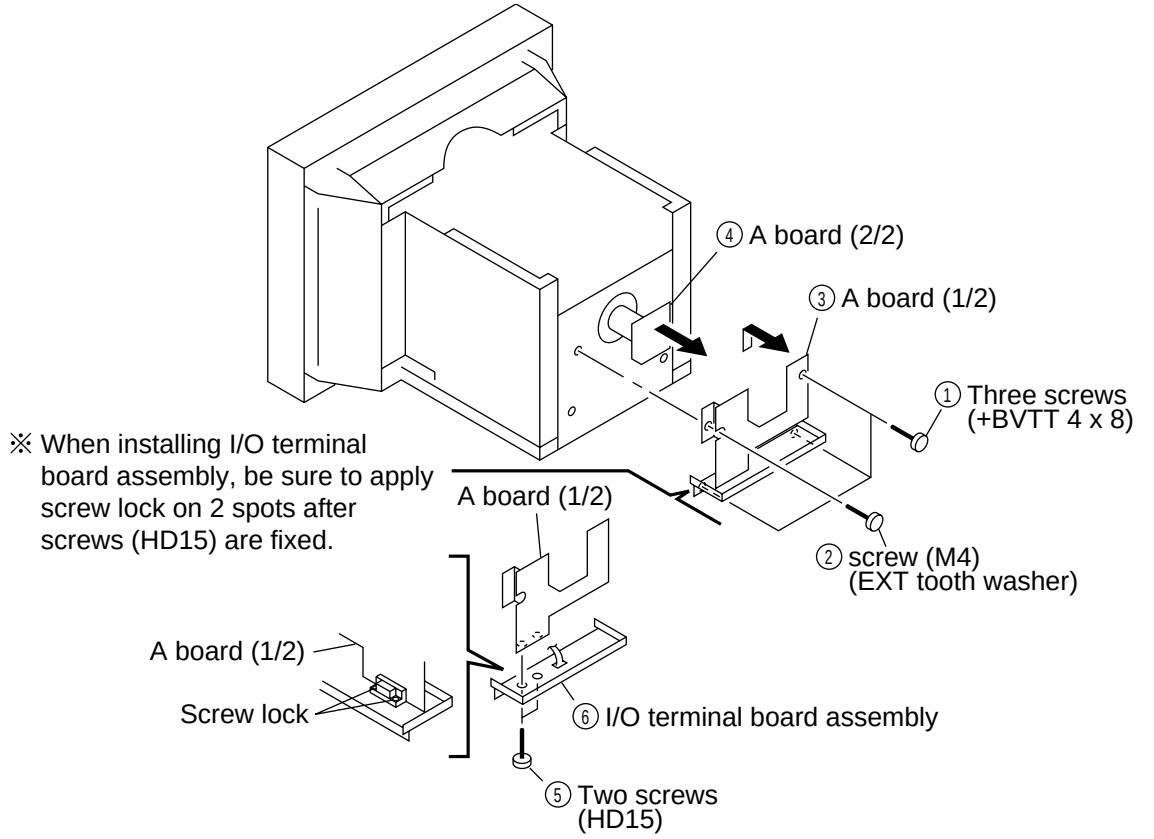
2-2. D BOARD REMOVAL



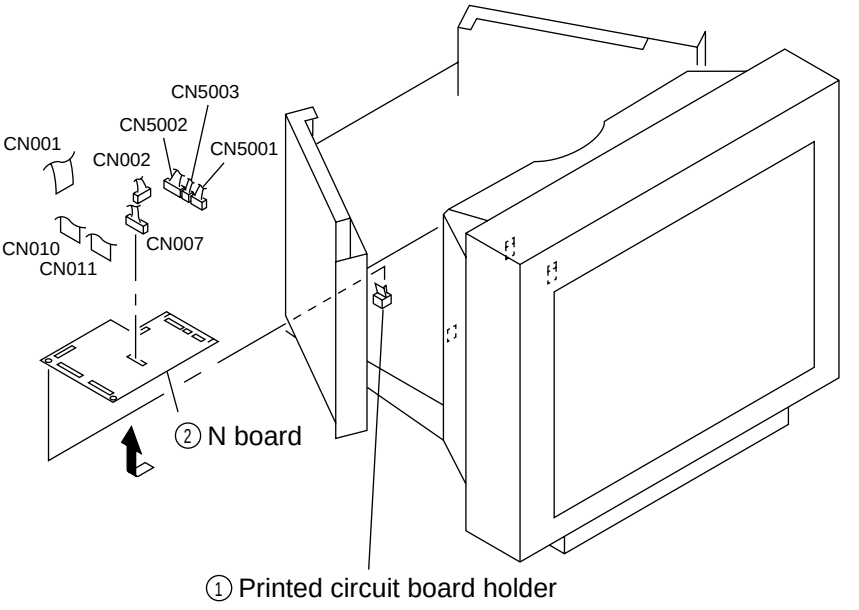
2-3. G BOARD REMOVAL



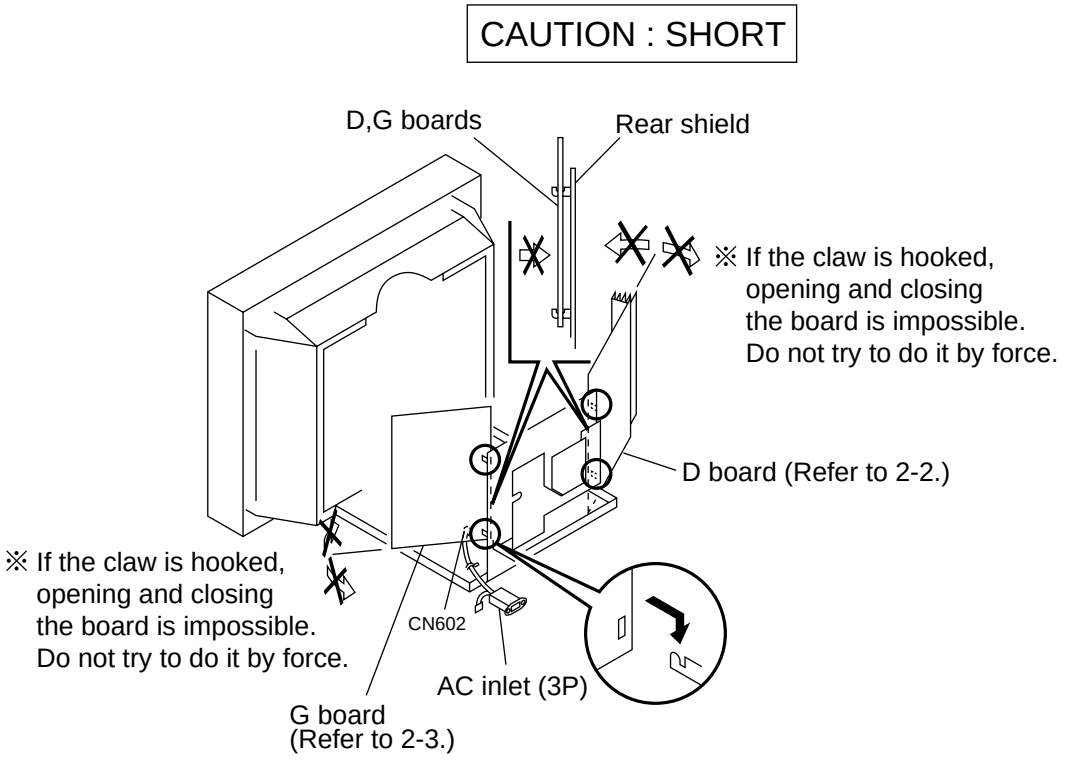
2-4. A BOARD, I/O TERMINAL BOARD ASSEMBLY REMOVAL



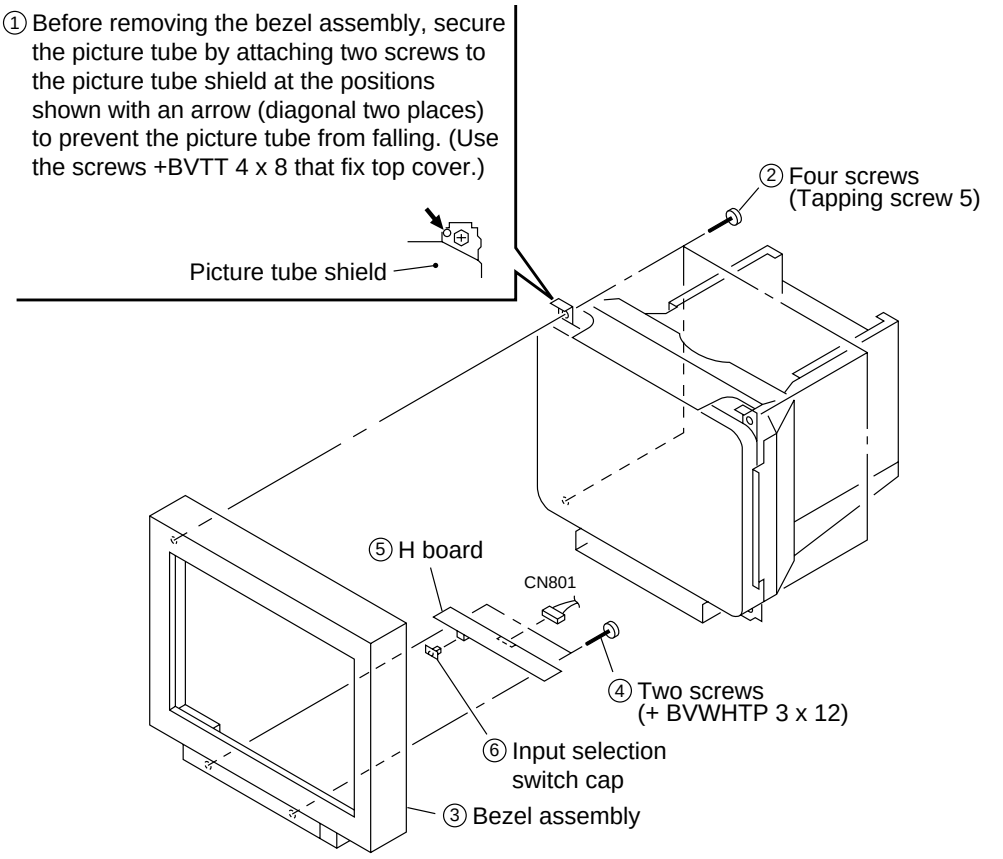
2-5. N BOARD REMOVAL



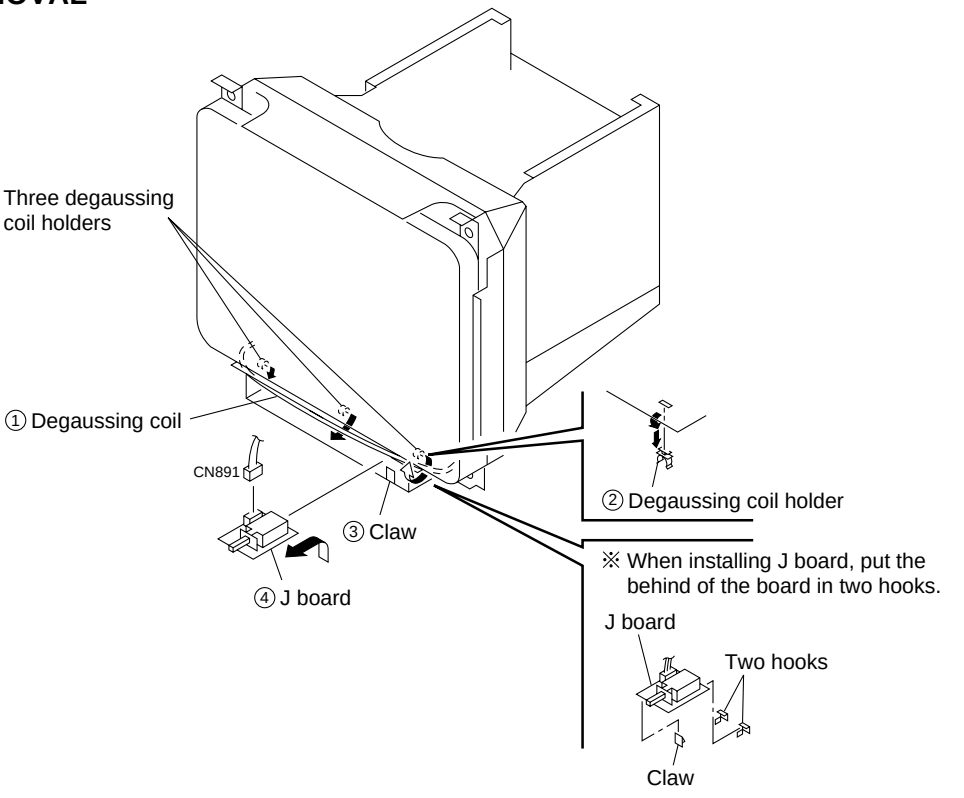
2-6. SERVICE POSITION



2-7. BEZEL ASSEMBLY, H BOARD REMOVAL

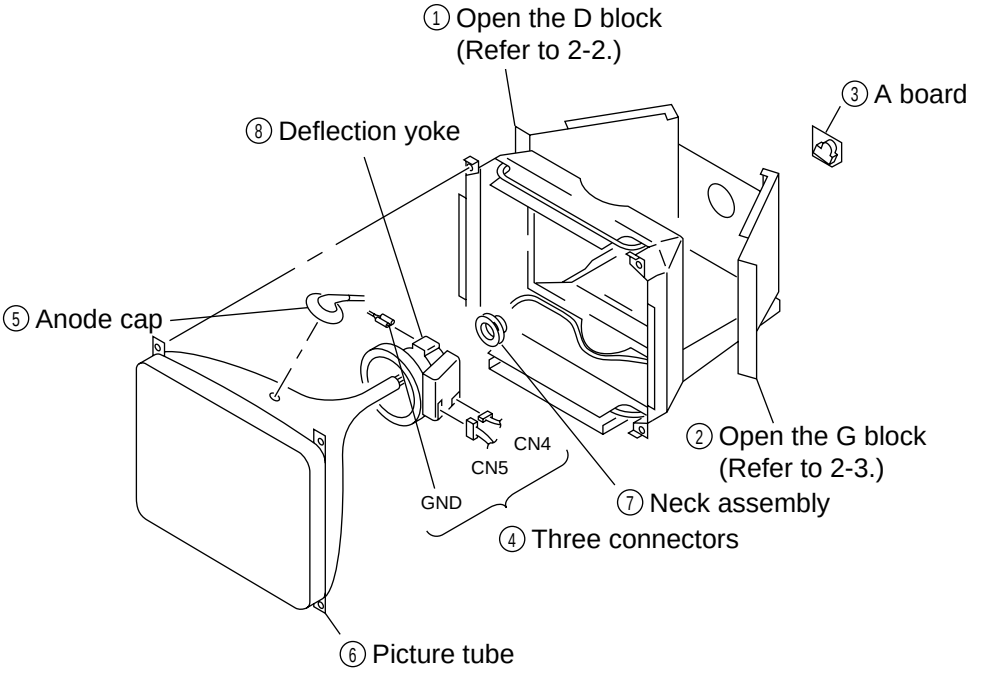


2-8. J BOARD REMOVAL



2-9. PICTURE TUBE REMOVAL

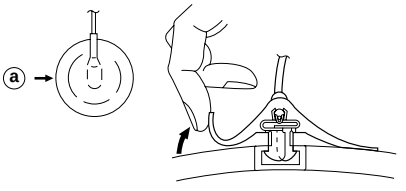
※ Remove the bezel assembly. (Refer to 2-7)



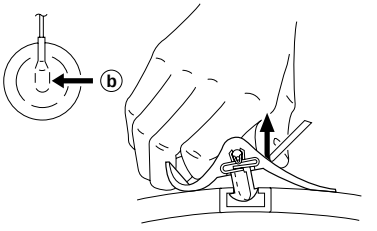
• REMOVAL OF ANODE-CAP

NOTE: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon painted on the CRT, after removing the anode.

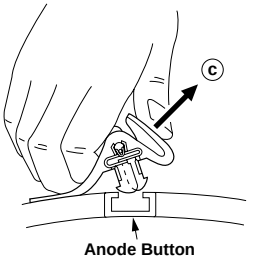
• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow Ⓐ.



② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow Ⓑ.



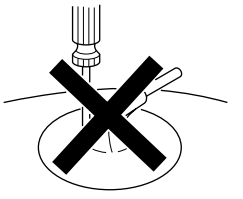
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow Ⓒ.

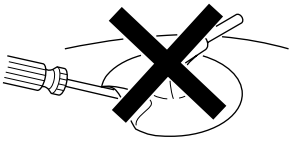
• HOW TO HANDLE AN ANODE-CAP

① Don't scratch the surface of anode-caps with sharp shaped material!

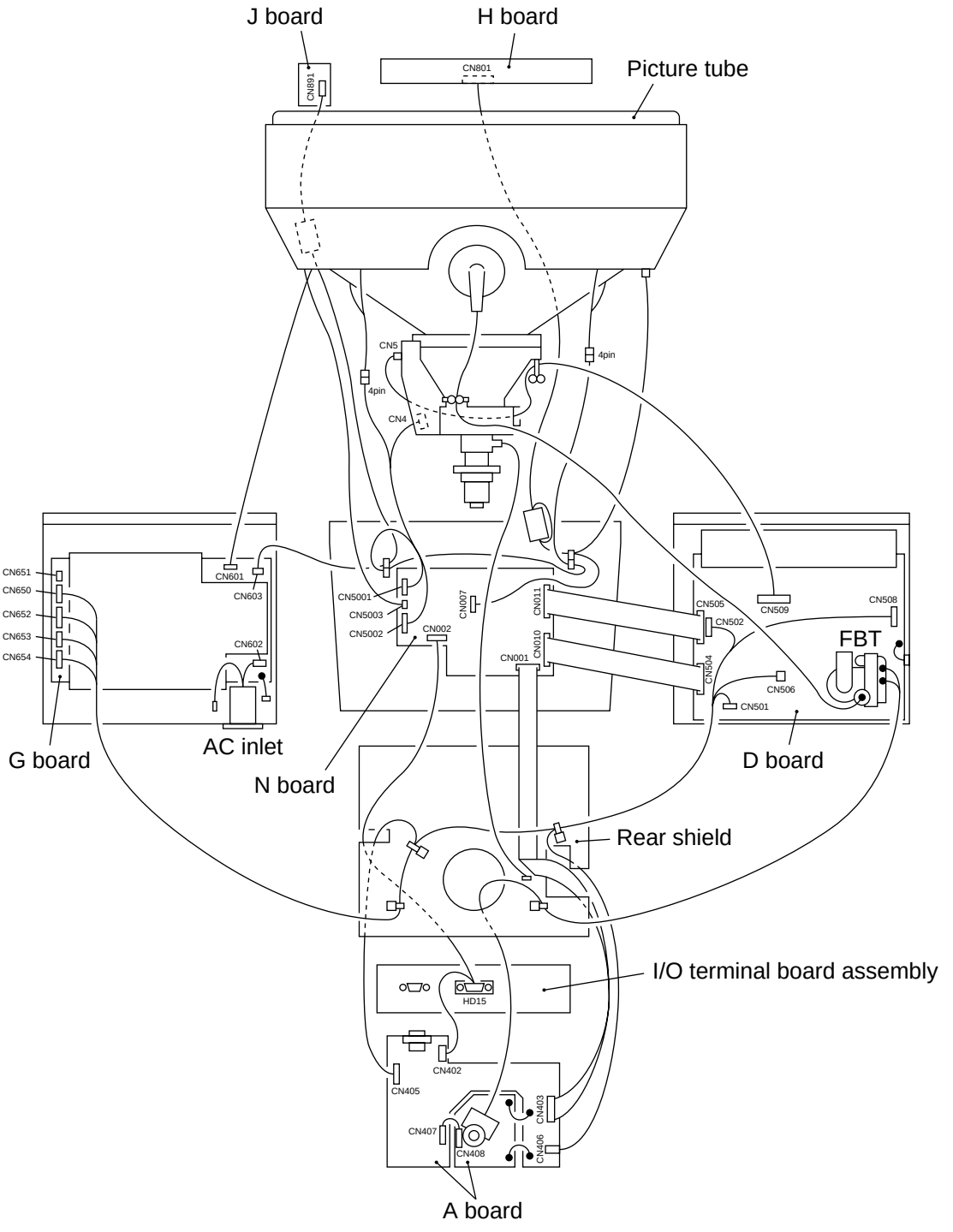
② Don't press the rubber hardly not to damage inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.

③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or damage the rubber.





2-10. HARNESS LOCATION



SECTION 3
SAFETY RELATED ADJUSTMENT

When replacing or repairing the shown below table, the following operational checks must be performed as a safety precaution against X-rays emissions from the unit.

	Part Replaced (⧓)
HV ADJ	RV901

	Part Replaced (◪)
HV Regulator Circuit Check	D Board C920, IC901, R923 R924, R929, R945, RV901, T902 (FBT) • Mounted D Board
HV Protector Circuit Check	D Board C922, C925, C926, D912, D914, D915, D921, Q907, Q908, R921, R922, R932, R937, R939, T902 (FBT) • Mounted D Board
Beam Current Protector Circuit Check	D Board C910, C921, C933, D901, D902, D913, IC503, IC901, R901, R920, R928, R930, R931, R940, R941, T902 (FBT) • Mounted D Board G Board IC652 • Mounted G Board N Board IC001, R031, R032 • Mounted N Board

* Confirm one minute after turning on the power.

a) HV Regulator Circuit Check

1) Enter black crosshatch signal (black on white background), and check that high voltage is in the specified range.
   [Specification]: 27.00 ± 0.10 kV
2) Check that the voltage of D912 cathode on the D board is 27.0 V or more.

b) HV Protector Circuit Check

1) Enter black crosshatch signal (black on white background).
2) Apply the specified voltage to the D912 cathode on the D board, and check that high voltage is 0.1 kV or less.
   [Specification]: 31.90 + 0.00/– 0.05 V

c) Beam Current Protector Circuit Check (1st Protector): D Board

1) Apply 4.5 V DC to CN504 ⑩ pin on the D board, and check high voltage value.
2) Connect constant current source to a section between T902 (FBT) ⑪ pin and ⑫ pin (GND) on the D board, and check that high voltage checked in 1) lowers by 1.50 kV or more when the specified current flows to the ⑪ pin.
   [Specification]: 2.00 + 0.00/– 0.01 mA

d) Beam Current Protector Circuit Check (2nd Protector): D Board

1) Connect constant current source to a section between T902 (FBT) ⑪ pin and ⑫ pin (GND) on the D board, and check that the voltage of CN504 ⑩ pin becomes 0 V or less when the specified current flows to the ⑪ pin.
   [Specification]: 1.70 + 0.00/– 0.01 mA

e) Beam Current Protector Circuit Check : G Board

1) Apply 264 V AC.
2) Enter about 5 V to CN650 ④ pin on the G board, and check that the output voltage of CN653 ② pin is about 15 V.
3) Enter about 0 ± 0.2 V to CN654 ④ pin, and check that the output voltage of CN653 ② pin becomes 1.0 V or less.

f) Beam Current Protector Circuit Check : N Board

1) Check that the protector operates, when the voltage of CN010 ⑯ pin on the N board is lowered to 0 V or less (for more than 2 seconds).

SECTION 4
ADJUSTMENTS

Note: Hand degauss must be used on stand-by or power-off condition.
This model has an automatic earth magnetism correction function by using an earth magnetism sensor and a LCC coil. When using a hand degauss while monitor (LCC coil) is being operated, it sometimes gets magnetized, and the system may not work properly as a result.

• Landing Rough Adjustment

1. Enter the full white signal. (or the full black dots signal).
2. Adjust the contrast to the maximum.
3. Make the screen monogreen.

Note: Off the outputs from R ch and B ch of SG.

4. Reverse the DY, and adjust coarsely the purity magnet so that a green raster positions in the center of screen.
5. Adjust the tilt of DY, and fix lightly with a clamp.

Note: "TILT" = "128".

• Landing Fine Adjustment

1. Put the set inside the Helmholtz coil. ("LCC SW" = "12")
2. Input the single green signal and set the "CONTRAST" = "255".

Note: After the W/B adjustment with 9300 K, measure an average of ΣIk when a full white signal is entered in the CONT MAX/BRT CENT status. Then make adjustment so that the specified screen can be attained after aging for 2 hours with Ik equivalent to 30% of the average value.

3. Demagnetize the metal part of the chassis with the hand degausser and coil degausser, and the CRT surface with the hand degausser.
   Input AC 230V to AC IN, turn on and off the power to perform auto degaussing. (Perform auto degaussing by setting "FUNCTION SW" = 1. Return to the original value after use.)
   Demagnetize the CRT surface with the hand degausser again.

Note:

(1) Hand degauss must be used on stand-by or power-off condition.
   This model has an automatic earth magnetism correction function by using an earth magnetism sensor and a LCC coil. When using a hand degauss while monitor (LCC coil) is being operated, it sometimes gets magnetized, and the system may not work properly as a result.
(2) Adjust in a non-magnetic field.
(3) If adjusting in a magnetic fields, add the shift from the non-magnetic field in your estimation.

4. Attach the wobbling coil to the designated part of the CRT neck.
5. Attach the sensor of the landing adjustment unit on the CRT surface.
6. Adjust the DY position and purity, and the DY tilt, and landing of the center and 4 corners with the landing checker.
   After adjustment, set "LCC SW" to "13".
   - Write terrestrial magnetism sensor reading VX and VY to "LCC VX" and LCC VY" respectively. Adjust the landing by moving "LCC NS", "LCC LT", "LCC LB", "LCC RT" and "LCC RB". However, the register adjustment must be limited within the following range.
     "LCC NS" 128 ± 15
     "LCC LT", "LCC LB", "LCC RT", "LCC RB" 128 ± 40
     Save the service data.

<Specifications>

Adjust so that the green is within the specification given right.
4 corner adjust target : within ± 1

(μm)

0 ± 3	0 ± 7.5	0 ± 3
0 ± 3	0 ± 7.5	0 ± 3
0 ± 3	0 ± 7.5	0 ± 3

The red and blue must be within the specification given right with respect to the green.

(μm)

± 6	± 6	± 6
± 6	± 6	± 6
± 6	± 6	± 6

A difference between red and blue must be within the specification given right.

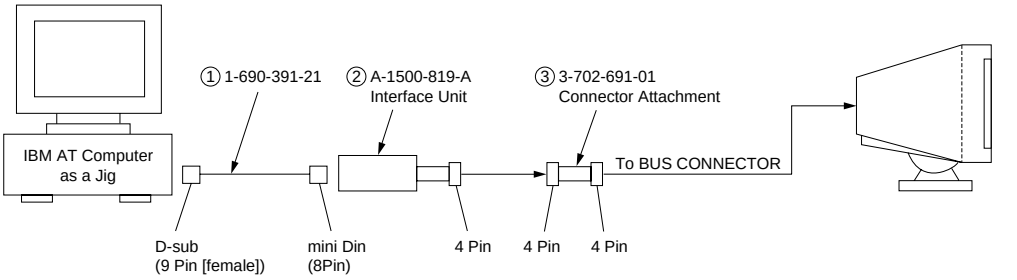
(μm)

10	10	10
10	7	10
10	10	10

* Adjustment and measurement should be made at the points one inch inside the fluorescent screen.

7. Tighten DY screw.
   Note: Torque 22 ± 2 kg•cm (2.2 ± 0.2 Nm) auto degauss it.
8. For the up/down swing, swing the DY and insert a wedge so that the up and down pins are equal at the top and bottom. Adjust the H.TRP VR of DY so that the horizontal trapezoid is equal at the left and right. Insert the wedge firmly so that the DY does not shake.
9. Check the landing of each corner, and if it does not satisfy the specification, adjust the landing of four corners using "LCC LT", "LCC LB", "LCC RT" and "LCC RB".
   However, the register adjustment must be limited within the following range.
   "LCC NS" 128 ± 15
   "LCC LT", "LCC LB", "LCC RT", "LCC RB" 128 ± 40
   After adjustment, save the service data.
10. Remove the sensor and wobbling coil.
11. Switch the signal to R.G.B., and check that each color is pure.
12. Check that the DY is not tilting, and fix the purity Mg with a white pen. Fix wedges with RTV.

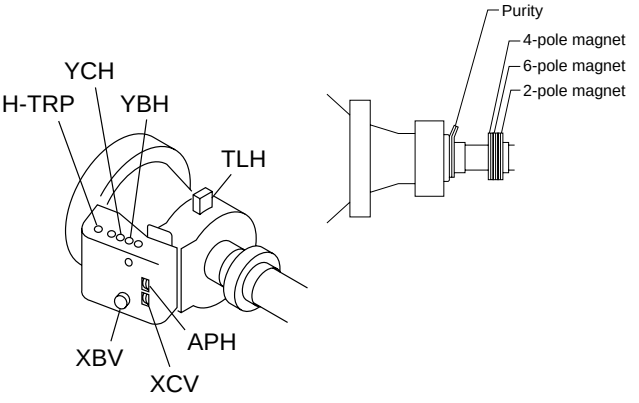
Connect the communication cable of the computer to the connector located on the D board. Run the service software and then follow the instruction.



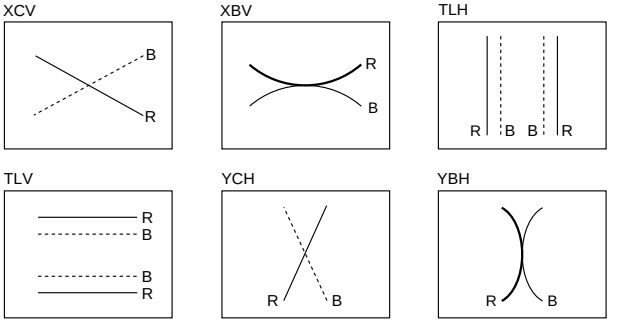
*The parts above (① ～ ③) are necessary for DAS adjustment.

- **Convergence Rough Adjustment**

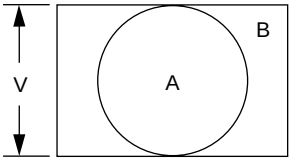
(1) Receive an image of the white crosshatch signals (white lines on black).
(2) Place the protrusions of the 6-fold poles magnet attached to the CRT neck upon each other.
(3) Make rough adjustment of the H and V direction convergence by using 4-fold poles magnet.



* Set so that the protruding parts of the 2 magnet rings agree with each other.



- **Convergence Specification**

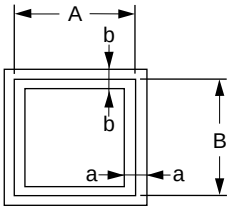


fH	60kHz ≦	60kHz>
A	0.20 mm	0.24 mm
B	0.24 mm	0.28 mm

- **White Balance Adjustment Specification**

1. 9300 K
   x = 0.283 ± 0.005
   y = 0.298 ± 0.005
   (All White)
2. 6500 K
   x = 0.313 ± 0.005
   y = 0.329 ± 0.005
   (All White)
3. 5000 K
   x = 0.346 ± 0.005
   y = 0.359 ± 0.005
   (All White)

- **Vertical and Horizontal Position and Size Specification**

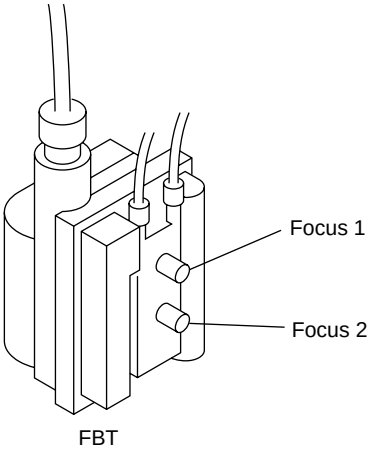


a ≦ 2.0 mm
b ≦ 2.0 mm

MODE	4 : 3	5 : 4
A	388	364
B	291	291

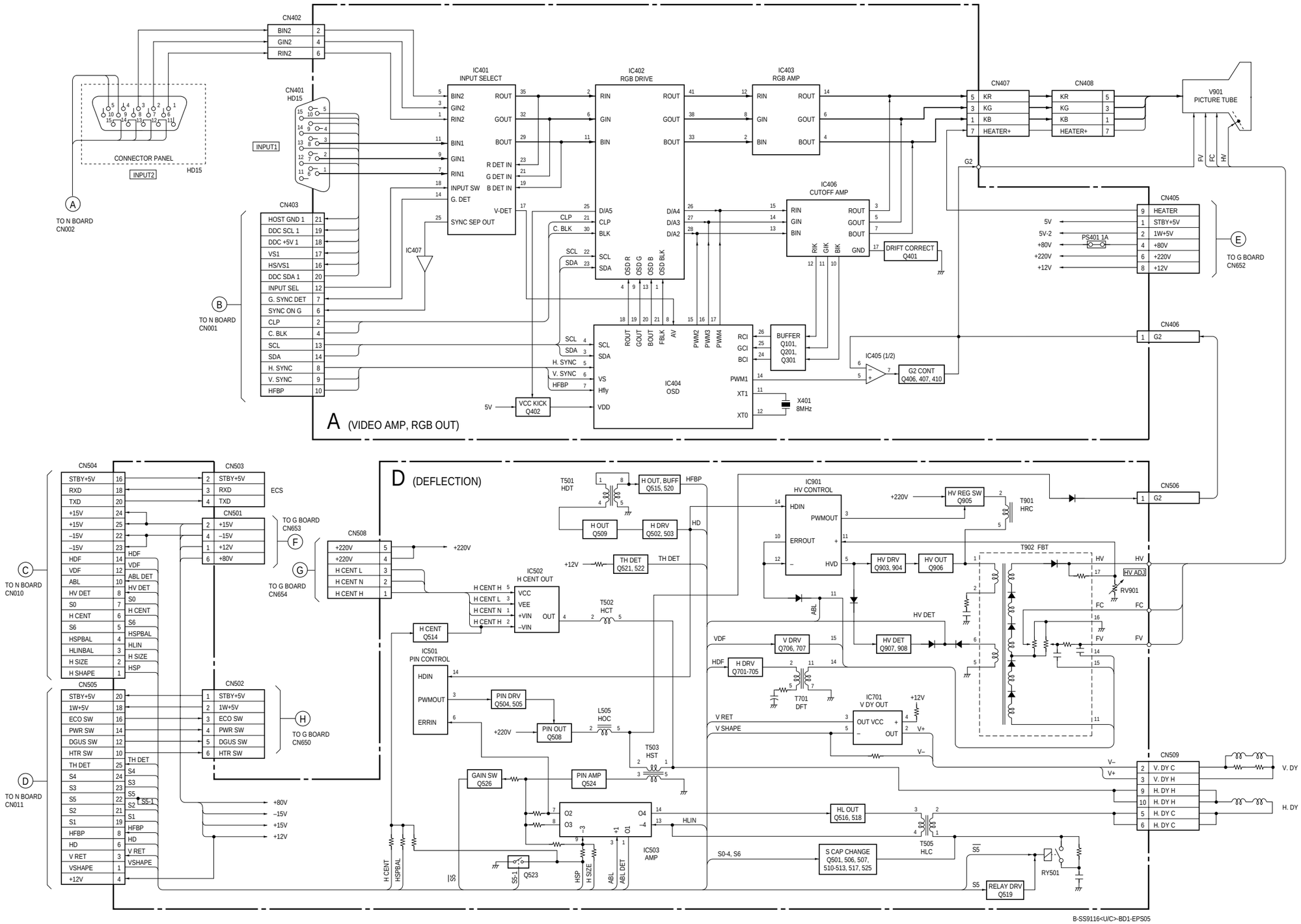
- **Focus adjustment**

Adjust the focus volume 1 and 2 for the optimum focus.



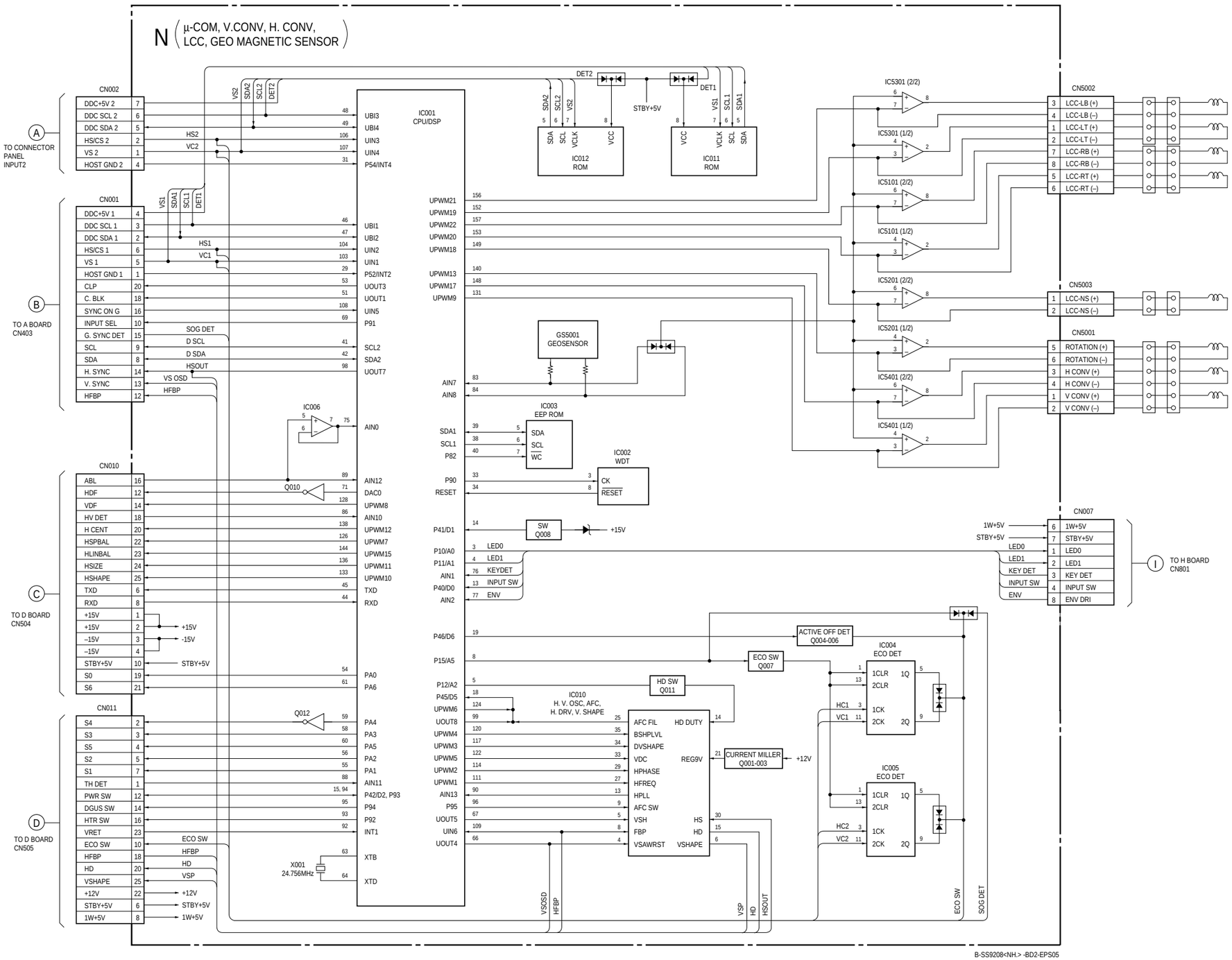
SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAMS

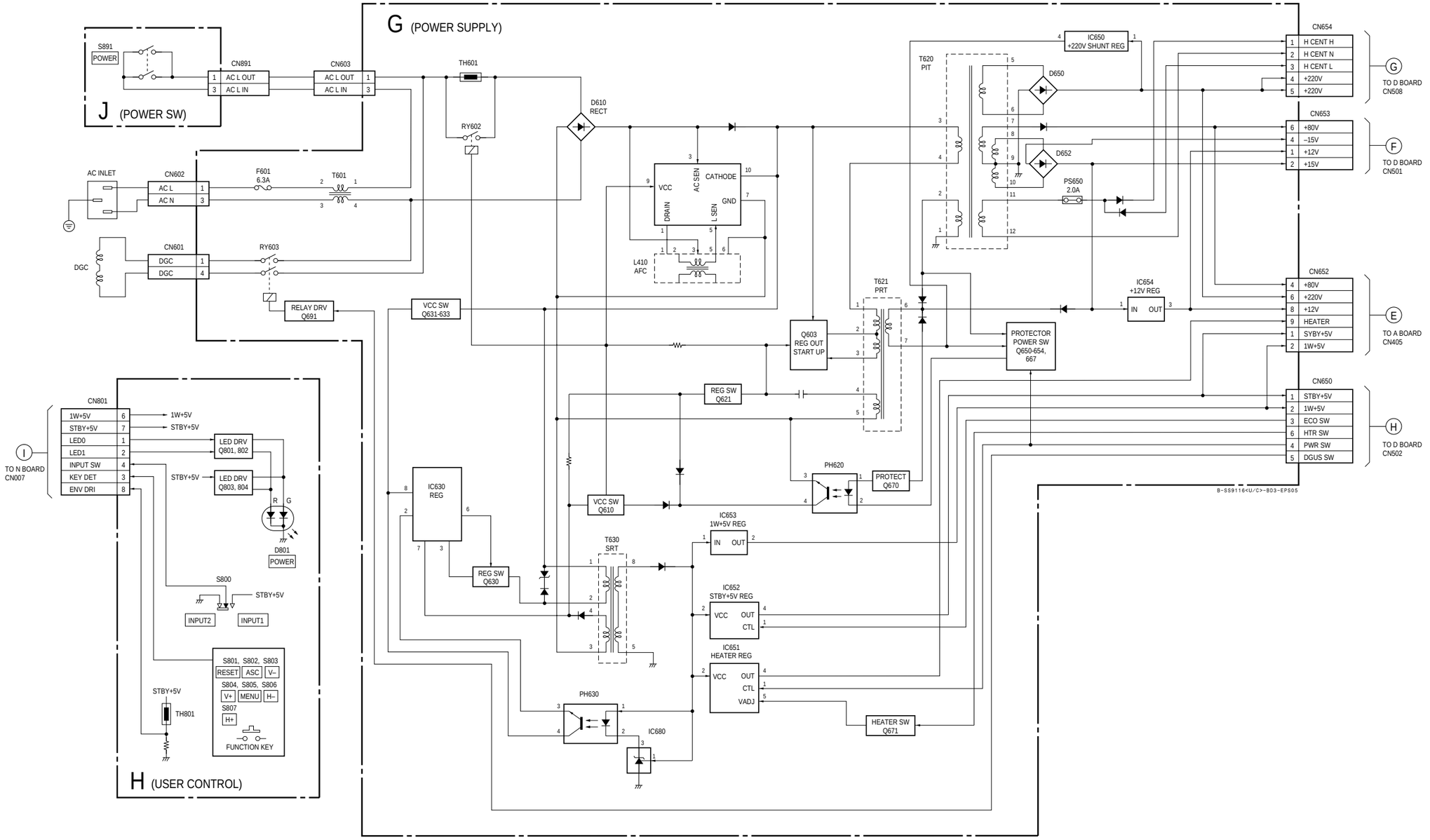


B-SS9116<U/C>-BD1-EPS05

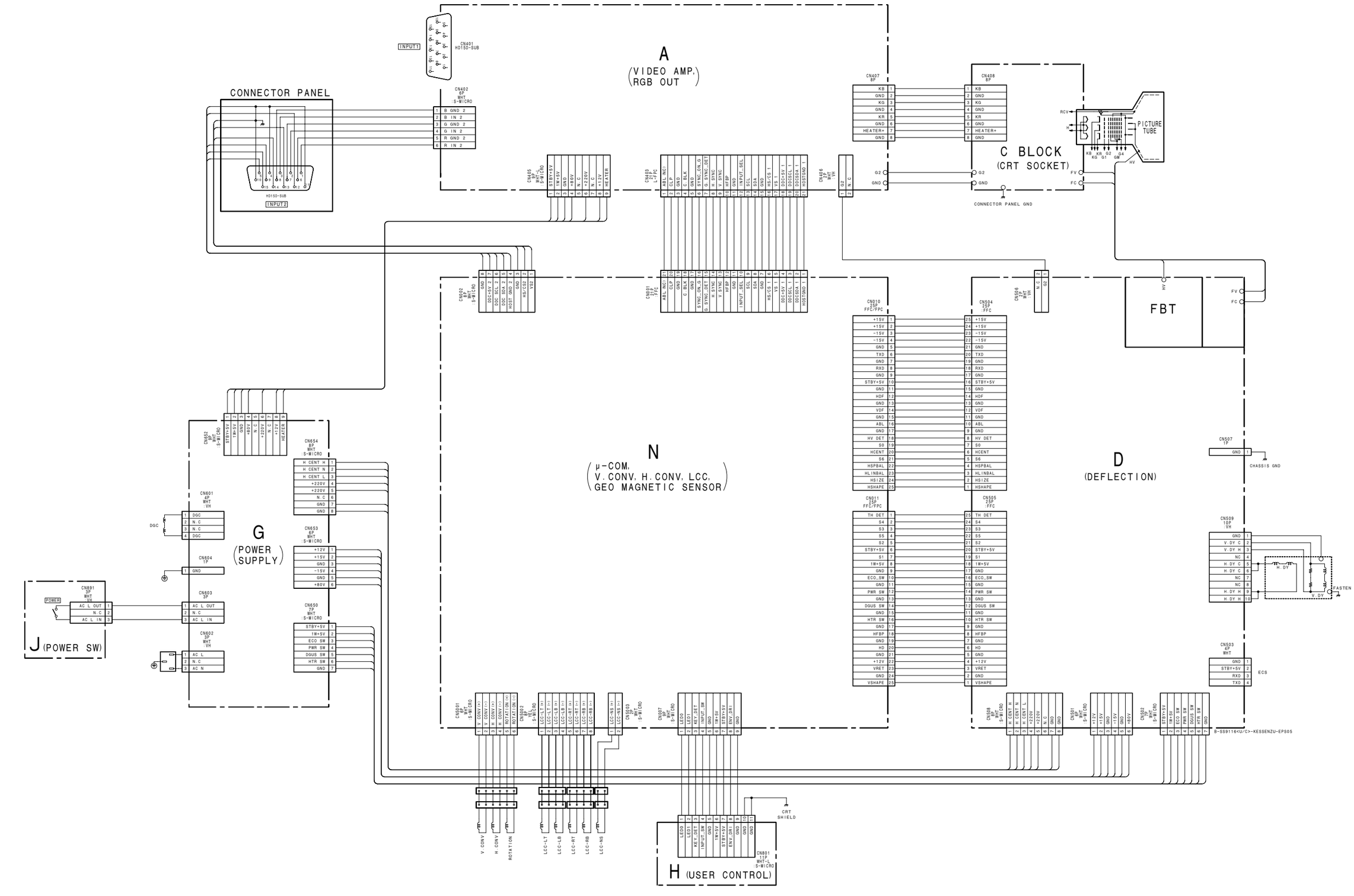
N (µ-COM, V.CONV, H. CONV, LCC, GEO MAGNETIC SENSOR)



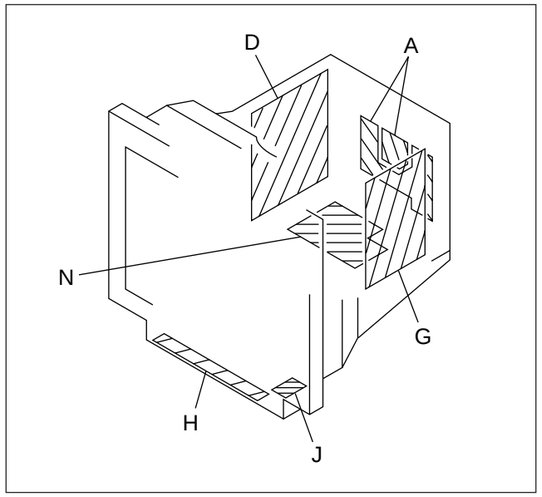
B-SS9208<NH.> -BD2-EPS05


G (POWER SUPPLY)
J (POWER SW)
H (USER CONTROL)
S891
POWER
CN891
CN603
AC L OUT
AC L IN
TH601
RY602
D610
RECT
AC INLET
CN602
AC L
AC N
F601
6.3A
T601
DGC
CN601
RY603
RELAY DRV
Q691
VCC SW
Q631-633
IC630
REG
REG SW
Q630
REG SW
Q621
Q603
REG OUT
START UP
T620
PIT
D650
D652
PS650
2.0A
IC650
+220V SHUNT REG
T621
PRT
IC654
+12V REG
PROTECTOR
POWER SW
Q650-654,
667
CN654
H CENT H
H CENT N
H CENT L
+220V
+220V
TO D BOARD
CN508
CN653
+80V
–15V
+12V
+15V
TO D BOARD
CN501
CN652
+80V
+220V
+12V
HEATER
SYBY+5V
1W+5V
TO A BOARD
CN405
CN650
STBY+5V
1W+5V
ECO SW
HTR SW
PWR SW
DGUS SW
TO D BOARD
CN502
B-SS9116<U/C>-BD3-EPS05
CN801
1W+5V
STBY+5V
LED0
LED1
INPUT SW
KEY DET
ENV DRI
TO N BOARD
CN007
LED DRV
Q801, 802
LED DRV
Q803, 804
D801
POWER
S800
INPUT2
INPUT1
S801, S802, S803
RESET
ASC
V–
S804, S805, S806
V+
MENU
H–
S807
H+
FUNCTION KEY
TH801
VCC SW
Q610
PH620
PROTECT
Q670
T630
SRT
IC653
1W+5V REG
IC652
STBY+5V REG
IC651
HEATER REG
PH630
IC680
HEATER SW
Q671

5-2. FRAME SCHEMATIC DIAGRAM



5-3. CIRCUIT BOARDS LOCATION



5-4. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in µF unless otherwise noted. (pF: µµF) Capacitors without voltage indication are all 50 V.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

  Pitch: 5 mm
  Rating electrical power 1/4 W (CHIP : 1/10 W)

- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- △ : internal component.
- : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth-ground.
- : earth-chassis.
- The components identified by ⋈ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
  Should replacement be required, replace only with the value originally used.
- When replacing components identified by ◪, make the necessary adjustments indicated. (See page 3-1)
- When replacing the part in below table, be sure to perform the related adjustment.

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

- All voltages are in V.
- Readings are taken with a 10 M digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- ∗ : Can not be measured.
- Circled numbers are waveform references.
- : B + bus.
- : B – bus.

- Divided circuit diagram

  One sheet of N board circuit diagram is divided into three sheets, each having the code N-ⓐ to N-ⓒ. For example, the destination (ab1) on the code N-ⓐ sheet is connected to (ab1) on the N-ⓑ sheet.

  a b 1
  Ref. No.
  Circuit diagram division code

	Part Replaced (⋈)
HV ADJ	RV901

	Part Replaced (◪)
HV Regulator Circuit Check	D Board C920, IC901, R923 R924, R929, R945, RV901, T902 (FBT) • Mounted D Board
HV Protector Circuit Check	D Board C922, C925, C926, D912, D914, D915, D921, Q907, Q908, R921, R922, R932, R937, R939, T902 (FBT) • Mounted D Board
Beam Current Protector Circuit Check	D Board C910, C921, C933, D901, D902, D913, IC503, IC901, R901, R920, R928, R930, R931, R940, R941, T902 (FBT) • Mounted D Board G Board IC652 • Mounted G Board N Board IC001, R031, R032 • Mounted N Board

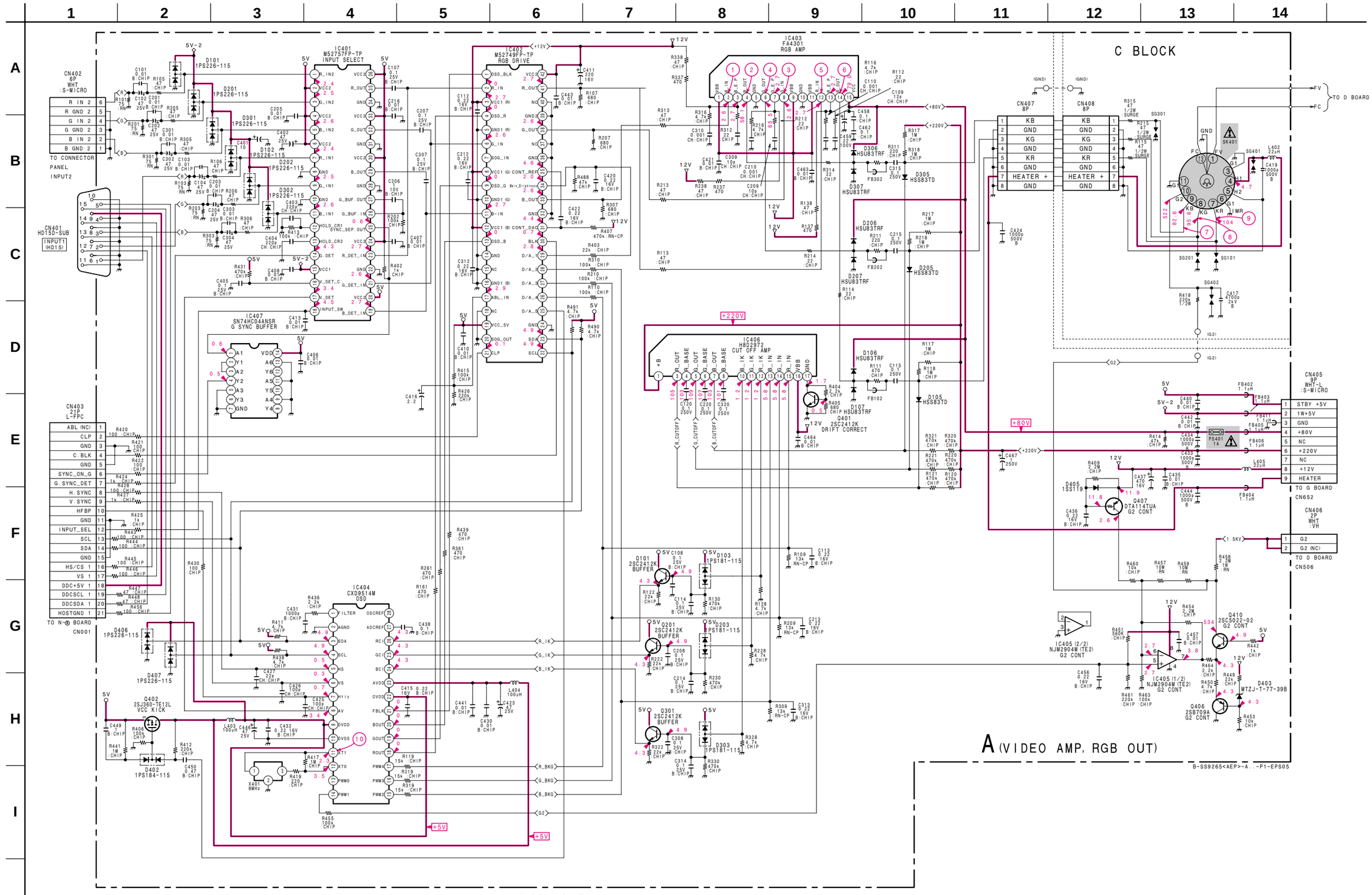
Terminal name of semiconductors in silk screen printed circuit (∗)

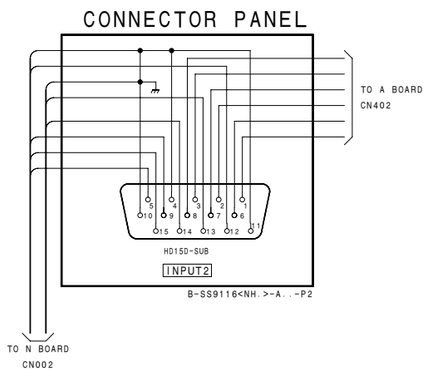
	Device	Printed symbol	Terminal name	Circuit
①	Transistor	T	Collector / Base T Emitter	
②	Transistor	—	Collector / Base Emitter	
③	Diode	⊓	Cathode — Anode	
④	Diode	T	Cathode / Anode T (NC)	
⑤	Diode	—	Cathode / Anode (NC)	
⑥	Diode	T	Common / Anode T Cathode	
⑦	Diode	—	Common / Anode Cathode	
⑧	Diode	T	Common / Anode T Anode	
⑨	Diode	—	Common / Anode Anode	
⑩	Diode	T	Common / Cathode T Cathode	
⑪	Diode	—	Common / Cathode Cathode	
⑫	Diode	|	Anode Anode Cathode | Cathode Anode Anode	
⑬	Transistor (FET)	|	Drain | Source Gate	
⑭	Transistor (FET)	⊢	Drain | Source Gate	
⑮	Transistor (FET)	|	□ Source □ Drain □ Gate	
⑯	Transistor	|	□ Emitter □ Collector □ Base	
–	Discrete semiconductot			

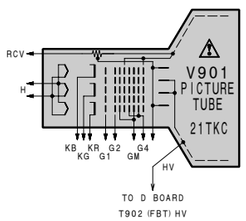
(Chip semiconductors that are not actually used are included.)

Ver.1.6

(1) Schematic Diagram of A Board



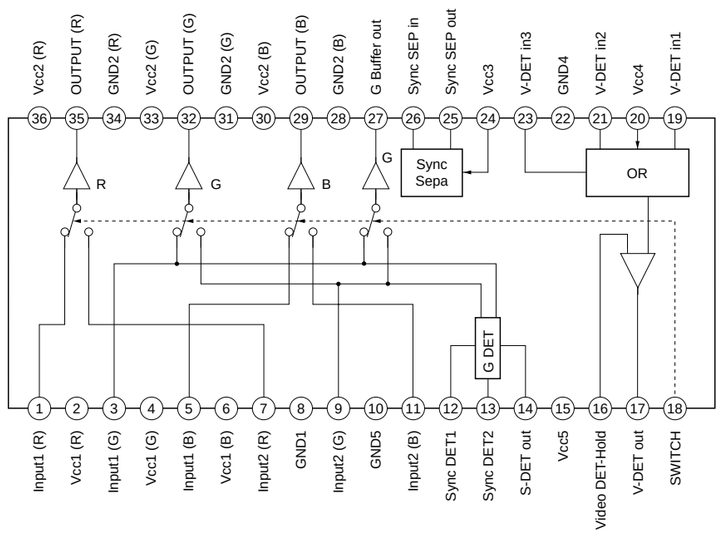




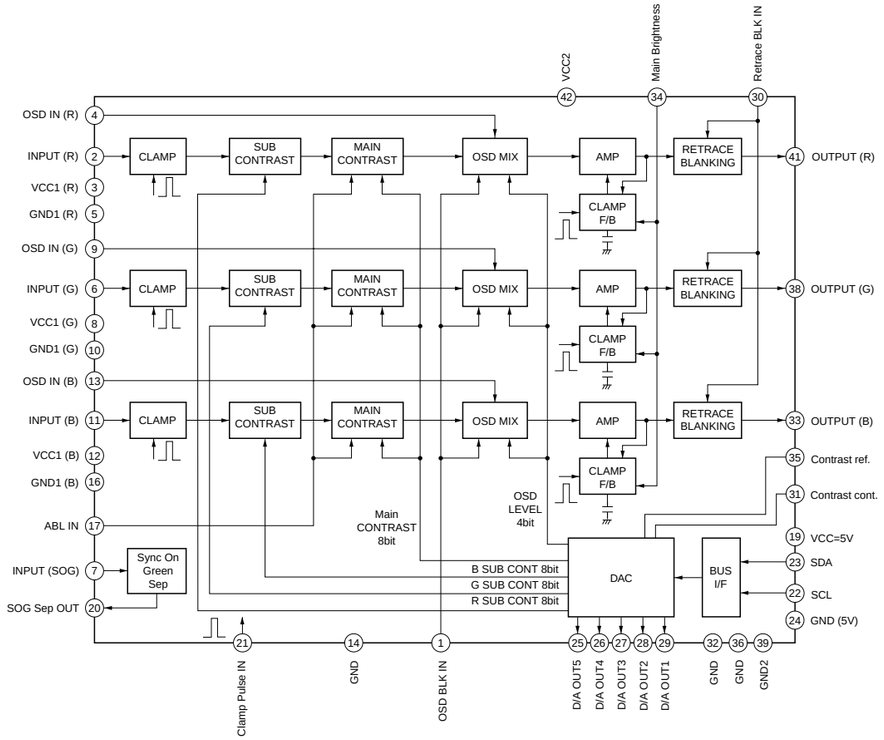
• A BOARD WAVEFORMS

① 4.7 Vp-p (H)	② 66.0 Vp-p (H)	③ 4.8 Vp-p (H)
④ 64.0 Vp-p (H)	⑤ 4.6 Vp-p (H)	⑥ 64.0 Vp-p (H)
⑦ 65.0 Vp-p (H)	⑧ 64.0 Vp-p (H)	⑨ 64.0 Vp-p (H)
⑩ 2.2 Vp-p (8MHz)		

• A BOARD IC401 M52757FP

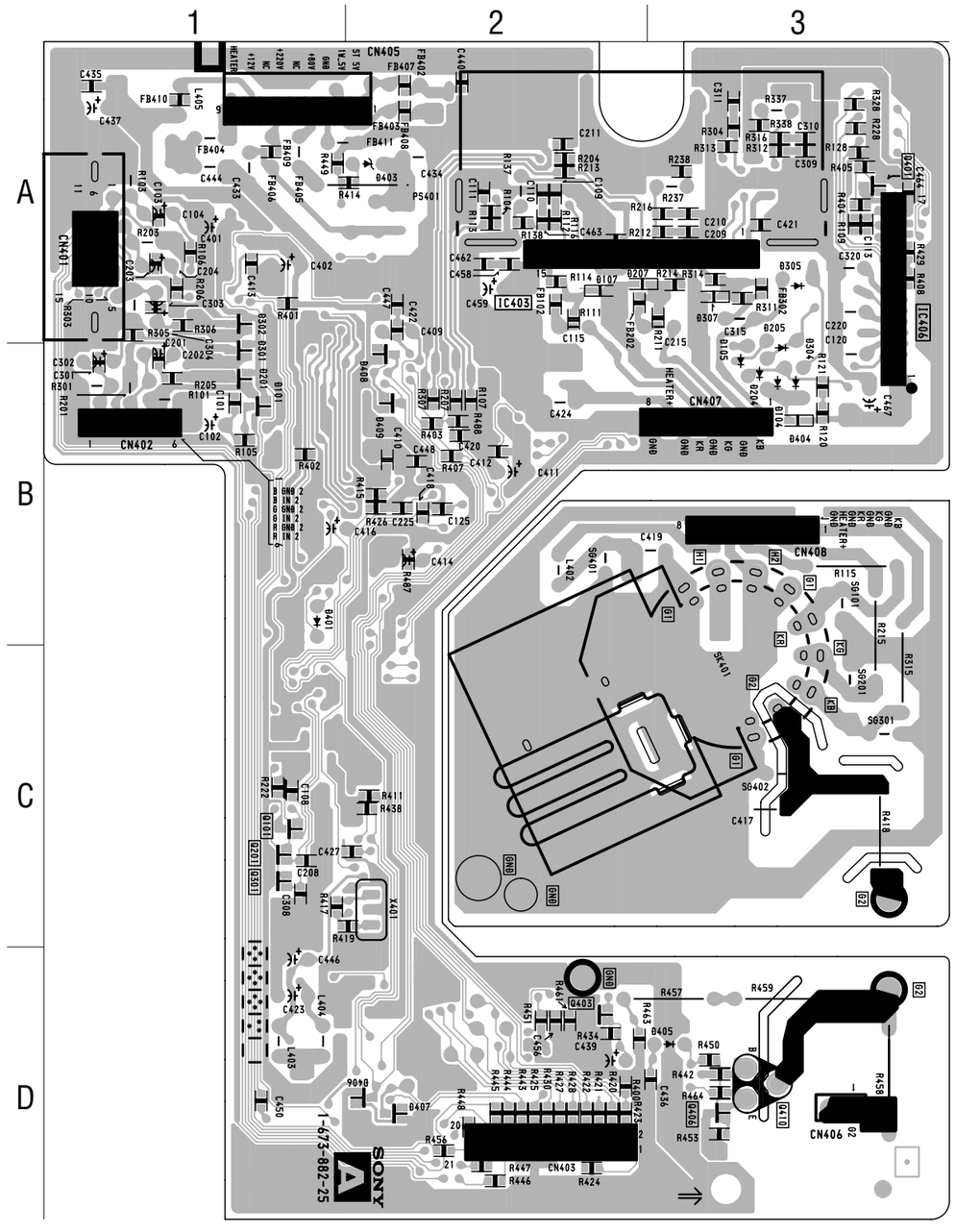


• A BOARD IC402 M52749FP



A [VIDEO AMP / RGB OUT]

— A BOARD (Conductor Side) —



• A BOARD SEMICONDUCTOR LOCATION

IC	(Conductor Side)	(Component Side)
IC401		B-3
IC402		B-2
IC403	A-2	A-2
IC404		C-3
IC405		D-2
IC406	A-3	A-1
IC407		D-2

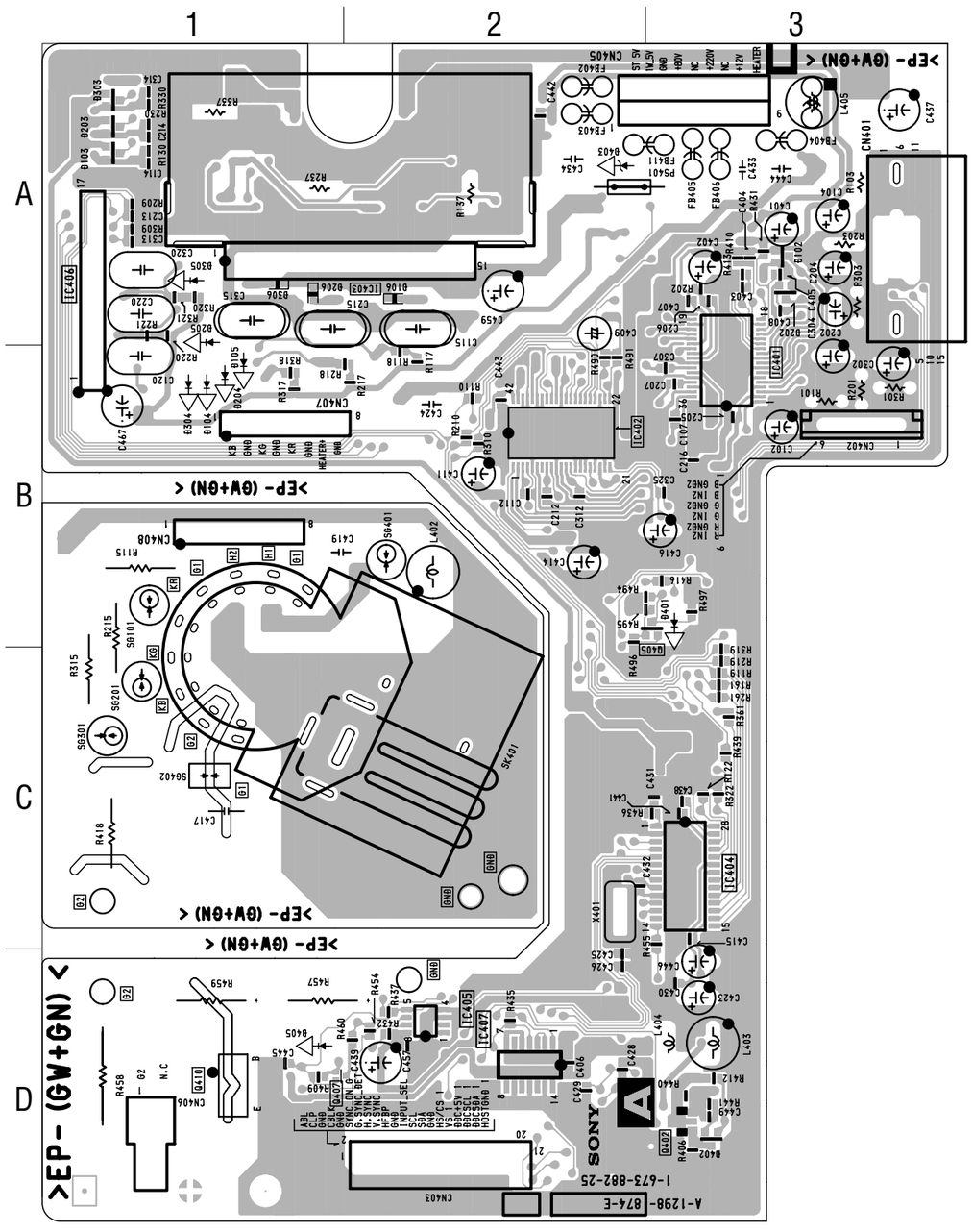
TRANSISTOR	(Conductor Side)	(Component Side)	✱
Q101	C-1		①
Q201	C-1		①
Q301	C-1		①
Q401	A-3		①
Q402		D-3	⑮
Q406	D-3		①
Q407		D-2	②
Q410	D-3	D-1	–

DIODE	(Conductor Side)	(Component Side)	✱
D101	B-1		⑥
D102		A-3	⑦
D103		A-1	⑪
D105	B-3	B-1	–
D106		A-2	③
D107	A-2		③
D201	B-1		⑥
D202		A-3	⑦
D203		A-1	⑪
D205	B-3	A-1	–
D206		A-1	③
D207	A-2		③
D301	B-1		⑥
D302	A-1		⑥
D303		A-1	⑪
D305	A-3	A-1	–
D306		A-1	③
D307	A-3		③
D402		D-3	⑨
D403	A-2	A-2	–
D405	D-3	D-1	–
D406	D-2		⑥
D407	D-2		⑥

CRYSTAL	(Conductor Side)	(Component Side)
X401	C-2	C-2

✱: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-10)

— A BOARD (Component Side) —

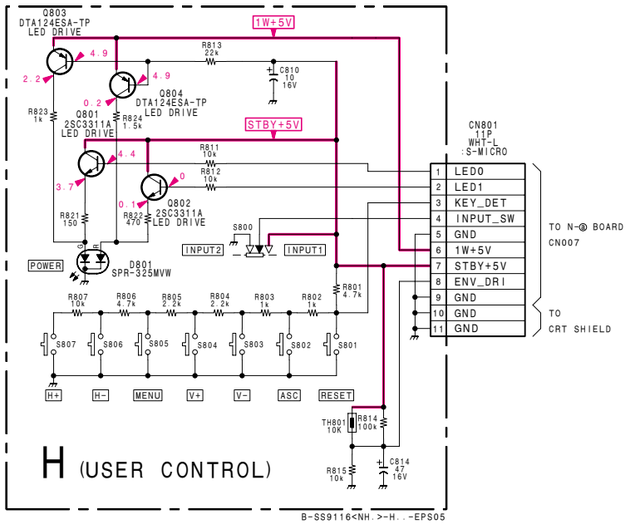


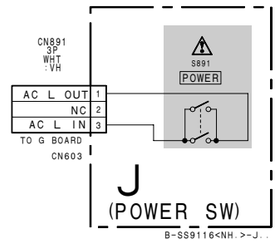
NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

Schematic diagram
← A board

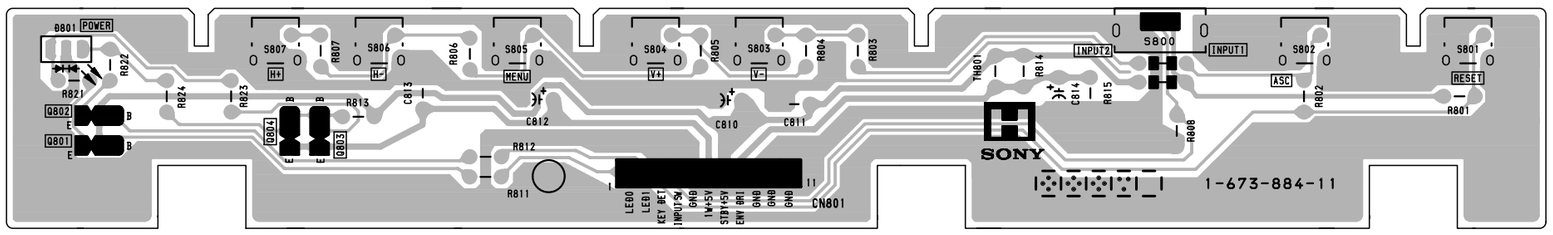
(2) Schematic Diagrams of H, J Boards

H [USER CONTROL] J [POWER SW]

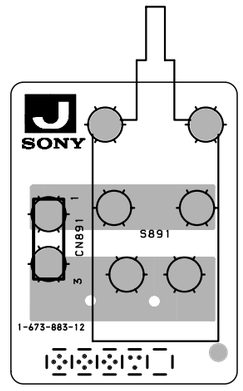




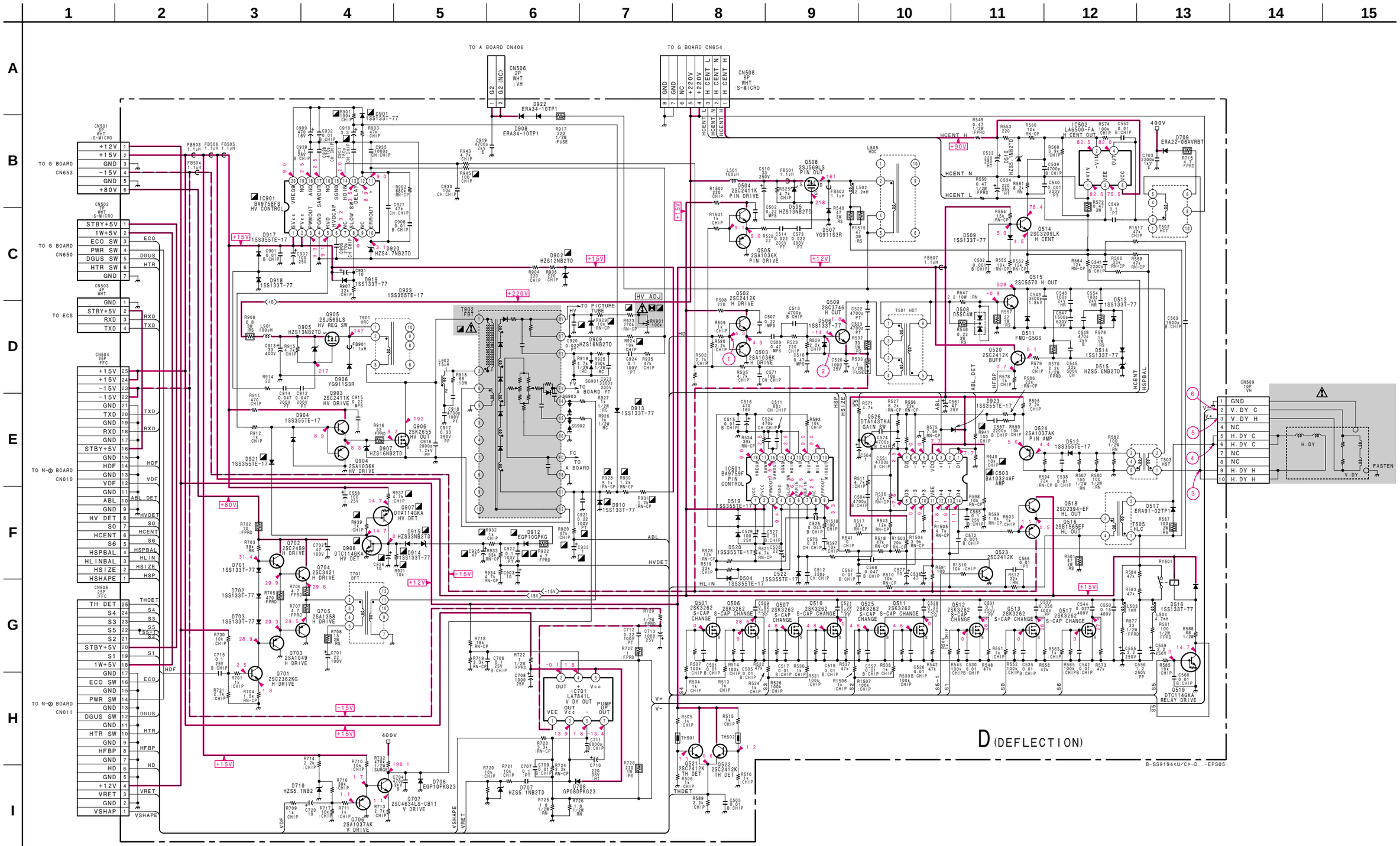
— H BOARD —



— J BOARD —



(3) Schematic Diagram of D Board



Schematic diagrams
← H J **boards**

Schematic diagram
D **board** →

• D BOARD WAVEFORMS

① 8.8 Vp-p (H)	② 1.9 Vp-p (H)	③ 568 Vp-p (H)
④ 50.6 Vp-p (H)	⑤ 54.5 Vp-p (H)	⑥ 2.1 Vp-p (H)

• D BOARD SEMICONDUCTOR LOCATION

IC

		*
IC501	C-4	
IC502	A-1	
IC503	C-4	
IC701	A-5	
IC901	C-1	

TRANSISTOR

		*
Q501	B-5	–
Q502	A-4	①
Q503	A-4	①
Q504	C-4	①
Q505	D-4	①
Q506	B-5	–
Q507	C-5	–
Q508	A-2	–
Q509	A-4	–
Q510	C-5	–
Q511	C-5	–
Q512	C-5	–
Q513	C-5	–
Q514	B-2	–
Q515	A-3	–
Q516	B-4	–
Q517	D-5	–
Q518	B-4	–
Q519	D-4	①
Q520	B-5	①
Q521	B-5	①
Q522	C-5	①
Q524	B-3	①
Q525	C-5	–
Q526	C-4	①
Q701	D-4	–
Q702	D-3	–
Q703	D-4	–
Q704	D-3	–
Q705	D-4	–
Q706	D-3	①
Q707	D-3	–
Q903	B-3	①
Q904	C-3	①
Q905	C-3	–
Q906	C-3	–
Q907	B-2	①
Q908	B-2	①

DIODE

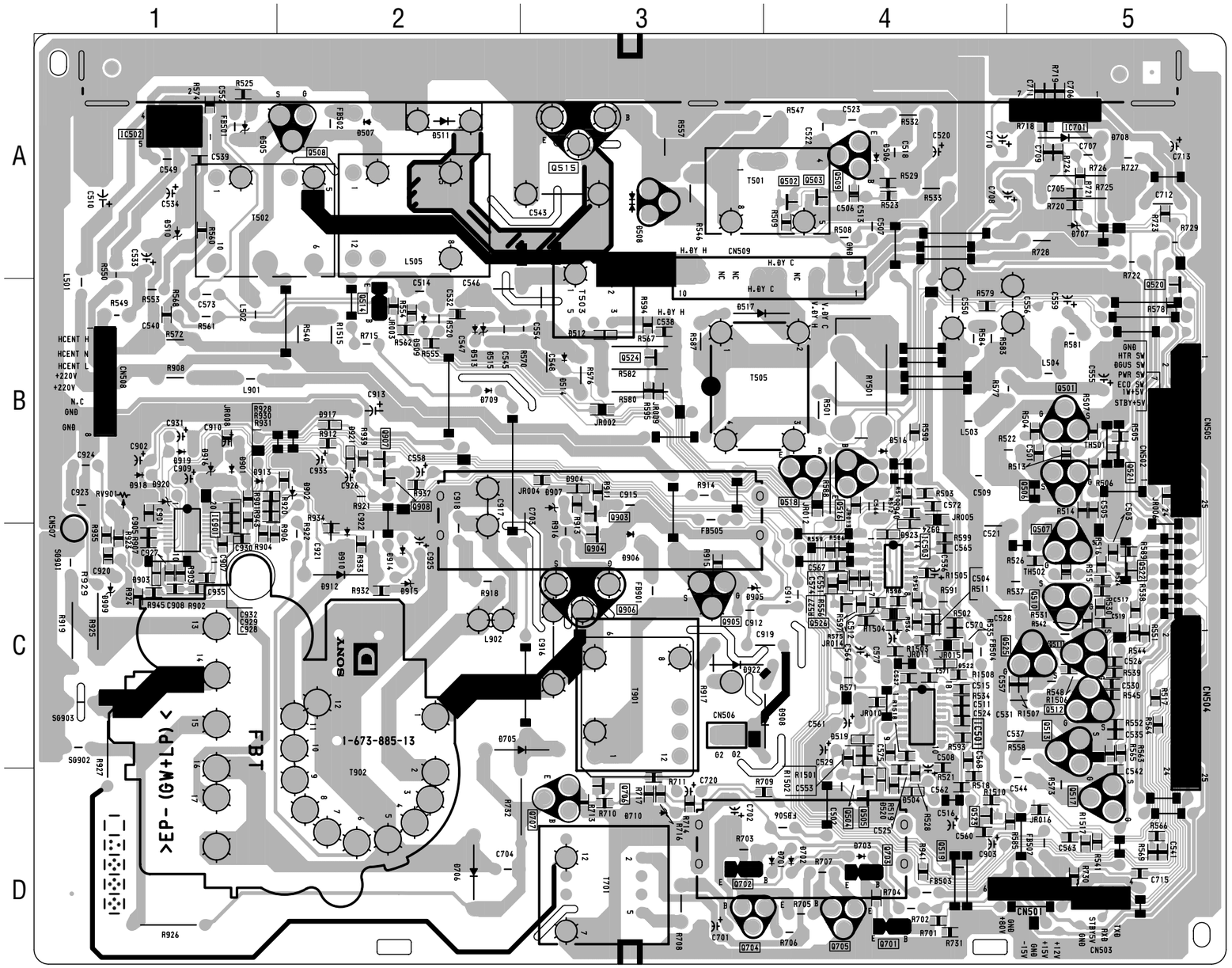
		*
D504	D-4	③
D505	A-1	–
D506	A-4	–
D507	A-2	–
D508	A-3	–
D509	B-2	–
D510	A-1	–
D511	A-2	–
D512	B-3	③
D513	B-2	–
D514	B-3	–
D515	B-2	–
D516	B-4	–
D517	B-3	–
D519	C-4	③
D520	D-4	③
D522	C-4	③
D701	D-4	–
D702	D-4	–
D703	D-4	–
D706	D-2	–
D707	A-5	–
D708	A-5	–
D709	B-2	–
D710	D-3	–
D901	B-1	–
D902	B-2	–
D904	B-3	③
D905	C-3	–
D906	C-3	–
D907	B-3	–
D908	C-3	–
D909	C-1	–
D910	C-2	–
D912	C-2	–
D913	B-1	–
D914	C-2	–
D915	C-2	–
D917	B-2	③
D918	B-1	–
D919	B-1	–
D920	B-1	–
D921	B-2	③
D922	C-3	–
D923	C-4	③

VARIABLE RESISTOR

RV901	B-1

***: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-10)**

— D BOARD —

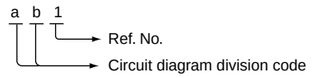


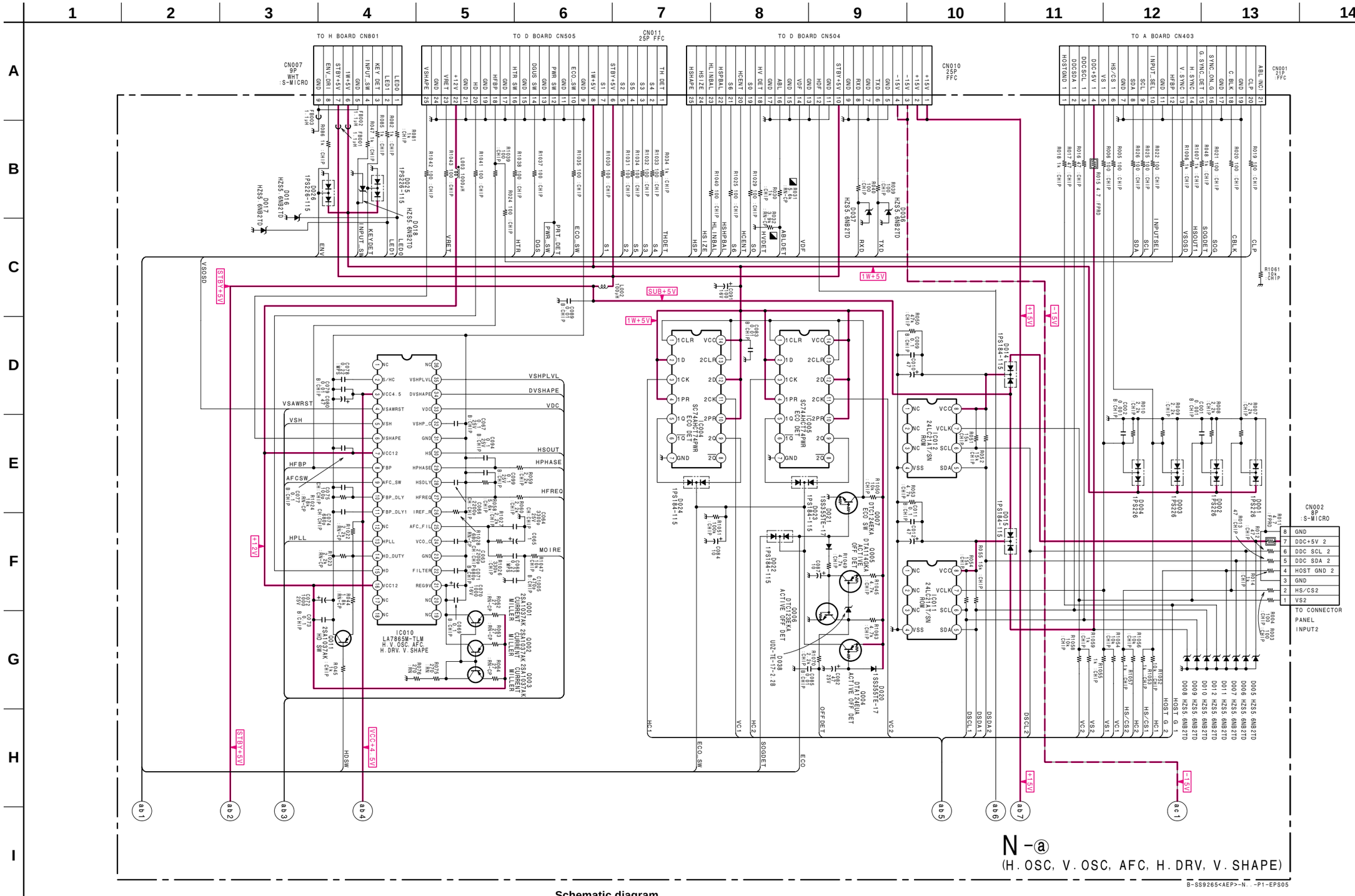
NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

(4) Schematic Diagrams of N (ⓐ, ⓑ, ⓒ) Board

- Divided circuit diagram

  One sheet of N board circuit diagram is divided into three sheets, each having the code N-ⓐ to N-ⓒ. For example, the destination (ab1) on the code N-ⓐ sheet is connected to (ab1) on the N-ⓑ sheet.



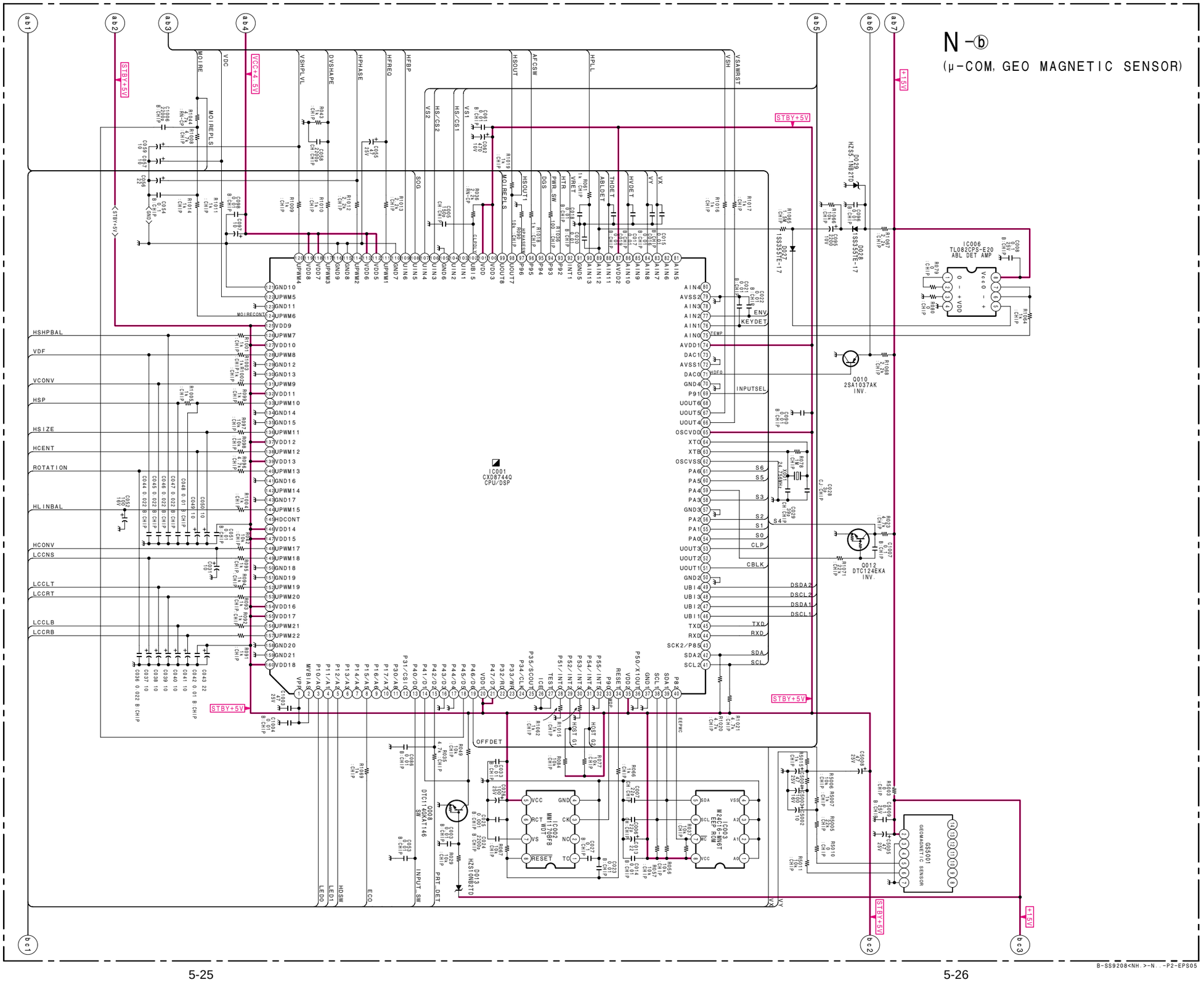


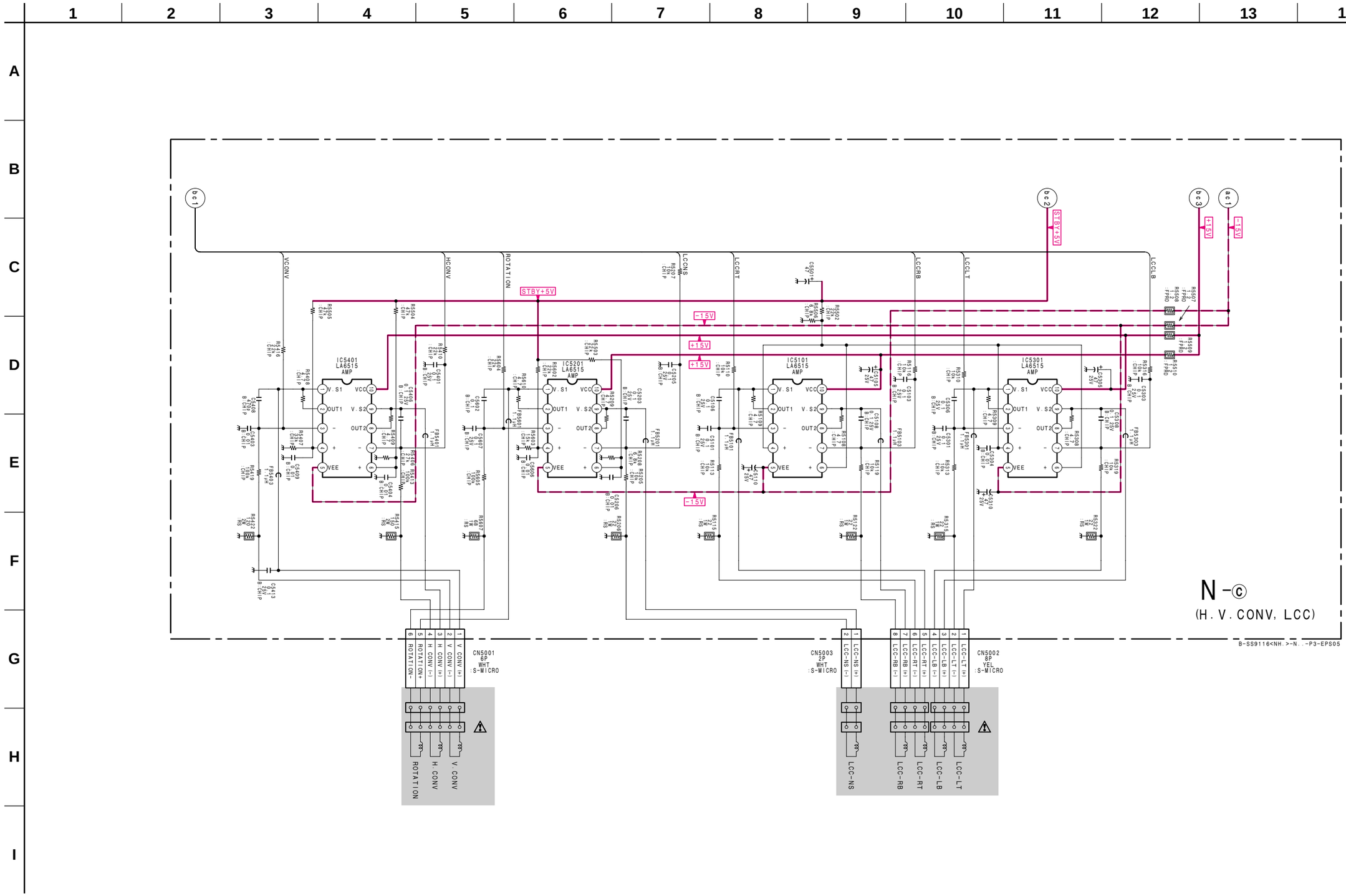
Schematic diagram

N-ⓐ board ➡

N-ⓑ

(μ-COM, GEO MAGNETIC SENSOR)





Schematic diagram

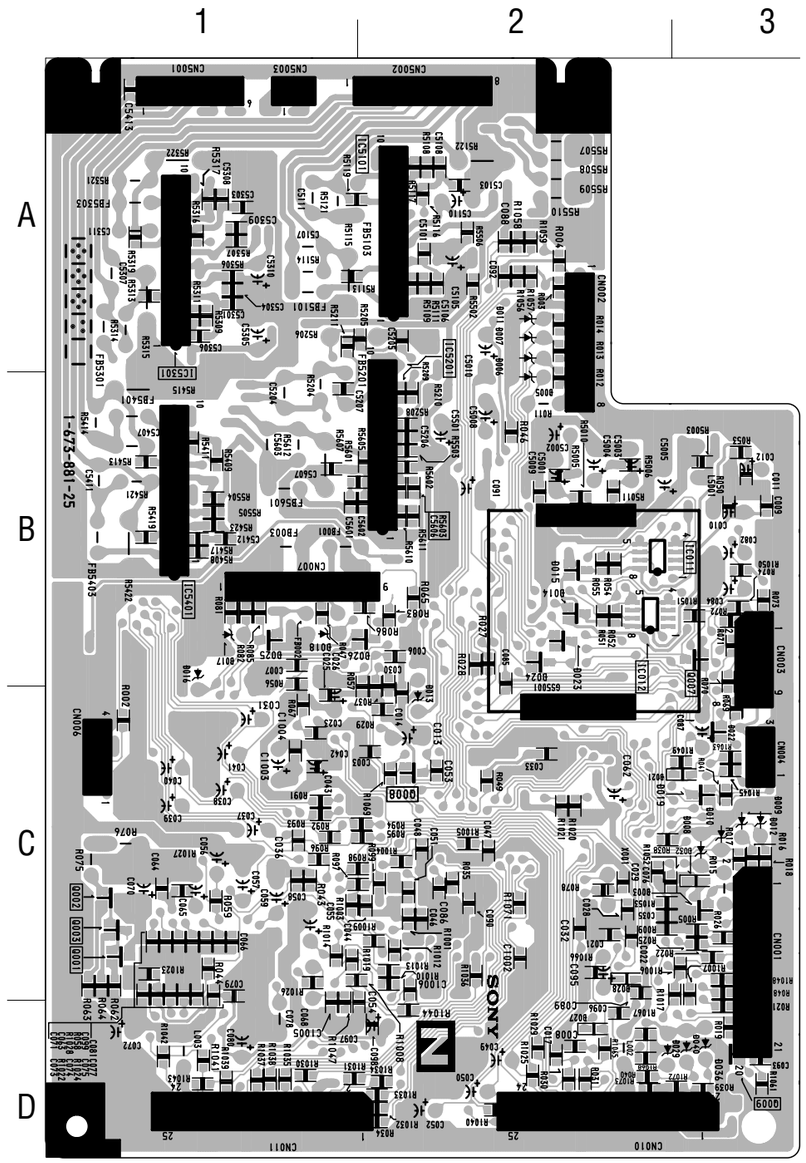
← **N**-ⓑ **board**

Schematic diagram

N-ⓒ **board** →

N [µ-COM, V.CONV, H.CONV, LCC, GEO MAGNETIC SENSOR]

— N BOARD (Conductor Side) —



• N BOARD SEMICONDUCTOR LOCATION

IC	(Conductor Side)	(Component Side)
IC001		C-2
IC002		C-2
IC003		C-2
IC004		B-2
IC005		B-2
IC006		D-1
IC010		C-2
IC011	B-2	
IC012	B-2	
IC5101	A-2	A-2
IC5201	B-2	B-2
IC5301	A-1	A-2
IC5401	B-1	B-2

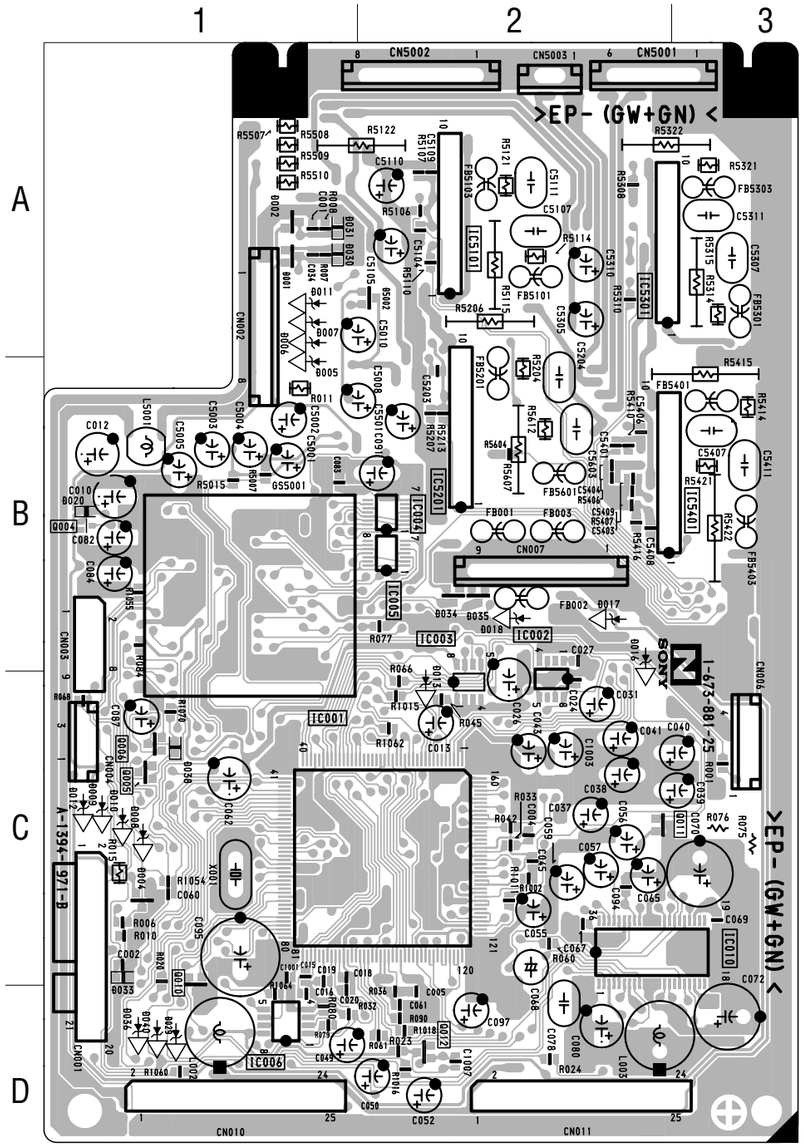
TRANSISTOR	(Conductor Side)	(Component Side)	*
Q001	C-1		①
Q002	C-1		①
Q003	C-1		①
Q004		B-1	②
Q005		C-1	②
Q006		C-1	②
Q007	B-3		①
Q008	C-2		①
Q010		C-1	①
Q011		C-2	②
Q012		D-2	②

DIODE	(Conductor Side)	(Component Side)	*
D001		A-1	⑦
D002		A-1	⑦
D003	C-3		⑥
D004		C-1	⑦
D005	B-2	B-1	–
D006	A-2	A-1	–
D007	A-2	A-1	–
D008	C-3	C-1	–
D009	C-3	C-1	–
D010	C-3	C-1	–
D011	A-2	A-1	–
D012	C-3	C-1	–
D013	C-2	C-2	–
D014	B-2		⑧
D015	B-2		⑧
D016	B-1	B-2	–
D017	B-1	B-2	–
D018	B-1	B-2	–
D020		B-1	③
D021	C-3		③
D022	C-3		⑧
D023	B-2		⑧
D024	B-2		⑧
D025	B-1		⑥
D026	B-2		⑥
D027	D-2		③
D028	D-2		③
D029	D-3	D-1	–
D036	D-3	D-1	–
D038		C-1	③

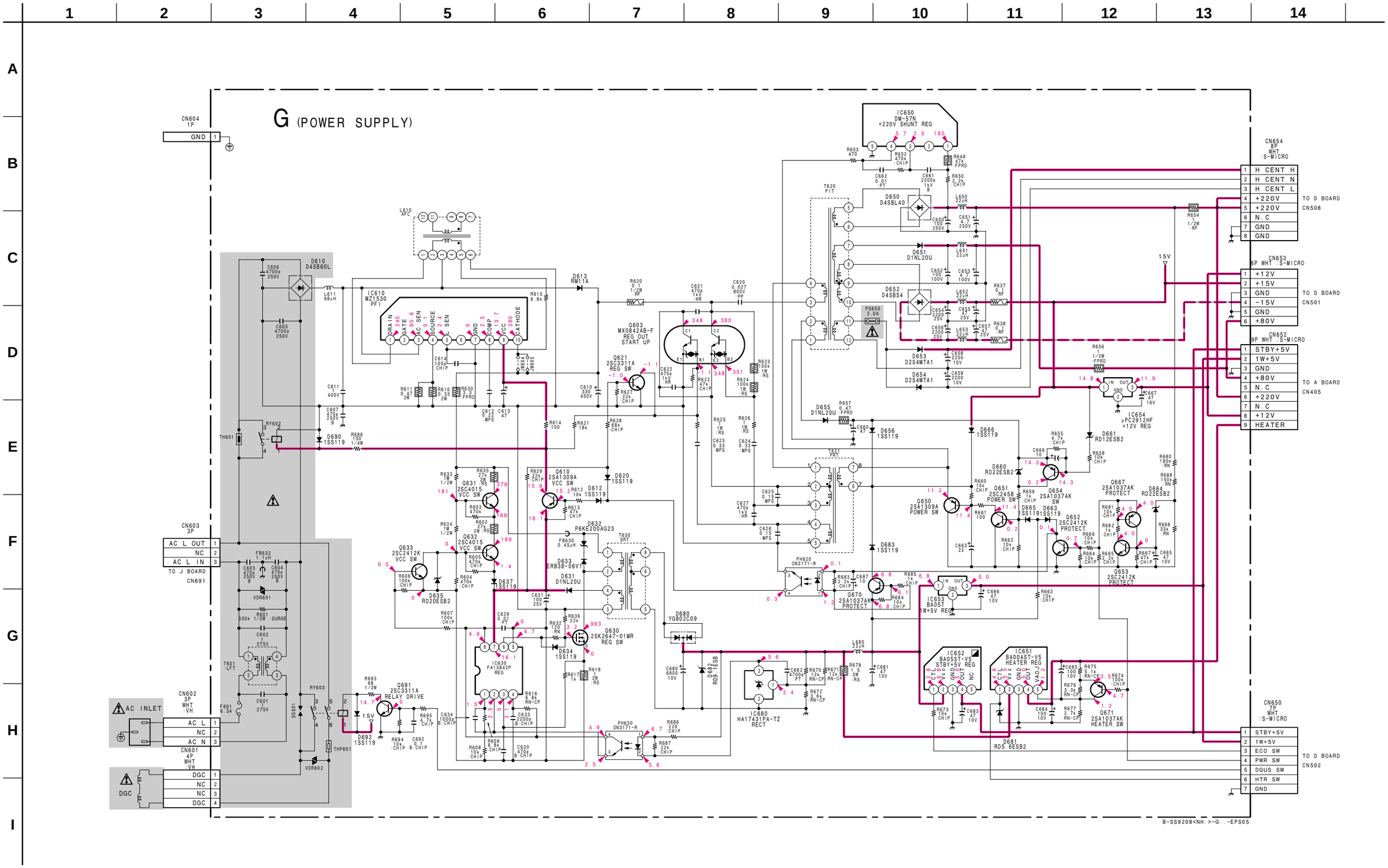
CRYSTAL	(Conductor Side)	(Component Side)
X001	C-2	C-1

∗: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-10)

— N BOARD (Component Side) —



(5) Schematic Diagram of G Board

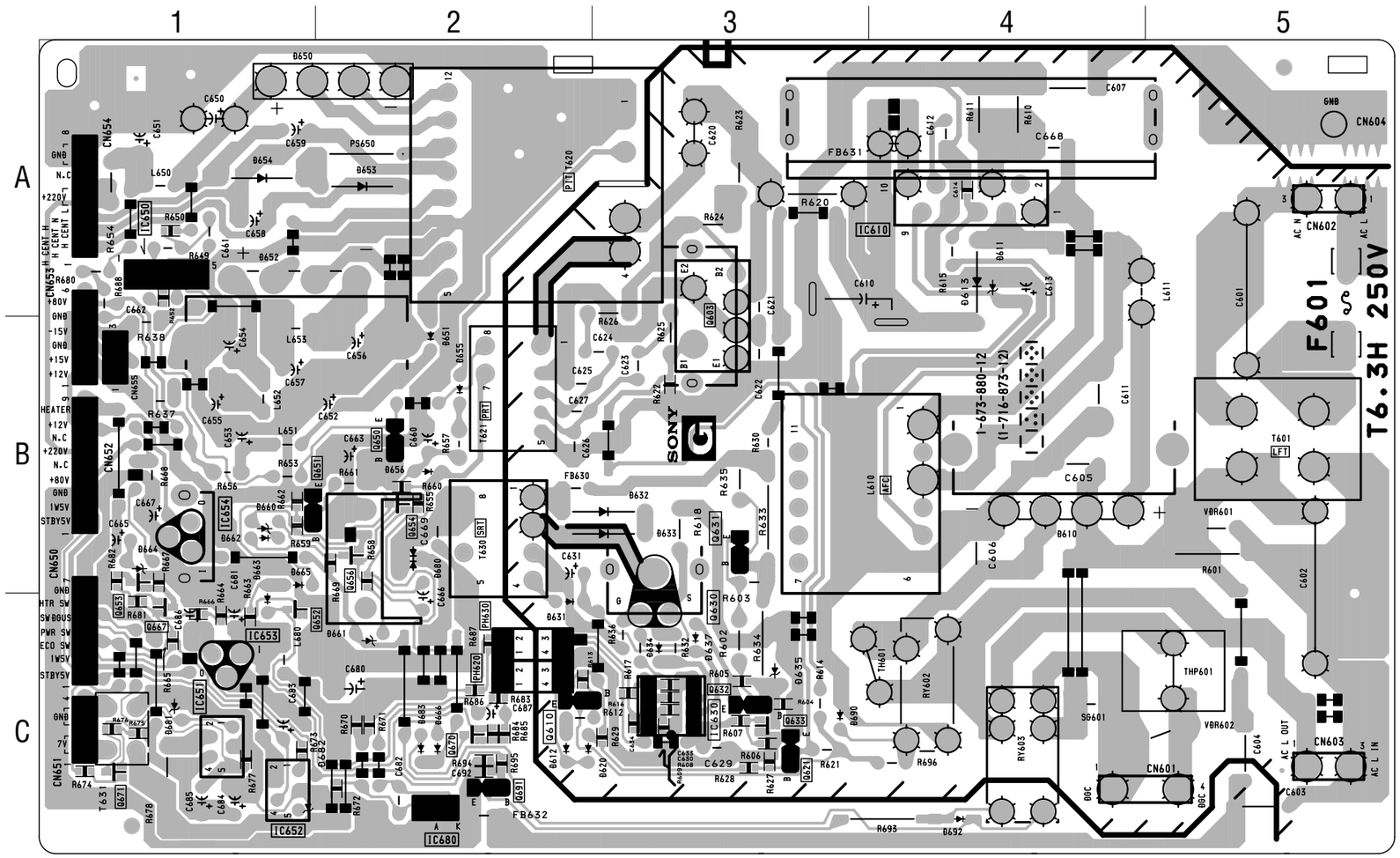


Schematic diagram

G board ➡

G [POWER SUPPLY]

— G BOARD —



NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

- **G BOARD SEMICONDUCTOR LOCATION**

IC		
IC610	A-4	
IC630	C-3	
IC650	A-1	
IC651	C-1	
IC652	C-1	
IC653	C-1	
IC654	B-1	
IC680	C-2	

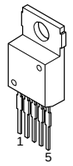
TRANSISTOR		*
Q603	A-3	–
Q610	C-2	–
Q621	C-3	–
Q630	C-3	–
Q631	B-3	–
Q632	C-3	–
Q633	C-3	①
Q650	B-2	–
Q651	B-1	–
Q652	C-1	①
Q653	B-1	①
Q654	B-2	①
Q667	C-1	①
Q670	C-2	①
Q671	C-1	①
Q691	C-2	–

DIODE	
D610	B-4
D612	C-2
D613	A-4
D620	C-2
D631	C-2
D632	B-3
D633	B-3
D634	C-3
D635	C-3
D637	C-3
D650	A-2
D651	B-2
D652	A-1
D653	A-2
D654	A-1
D655	B-2
D656	B-2
D660	B-1
D661	C-2
D663	C-1
D664	B-1
D665	B-1
D666	C-2
D680	B-2
D681	C-1
D682	C-1
D683	C-2
D690	C-3
D692	C-4

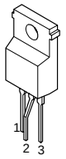
∗: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-10)

5-5. SEMICONDUCTORS

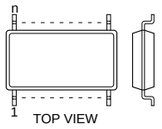
BA00AST-V5
BA05ST-V5
LA6500-FA



BA05T

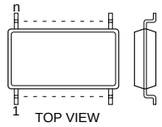


BA10324AF-E2
SN74AHCT74PWR
SN74HC04ANS
SN74HC04ANSR
XRA10324AF



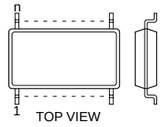
14pin SOP

NJM082M
NJM2904M
NJM2904M(TE2)
TL082CPS-E20
24LC21AT/SN



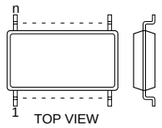
8pin SOP

BA9758FS-E2



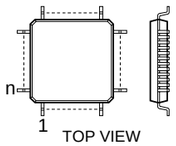
20pin SOP

BA9759F-E2



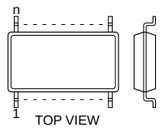
18pin SOP

CXD8744Q



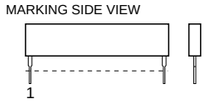
160pin QFP

CXD9514M



28pin SOP

DM-57N



5pin SIP

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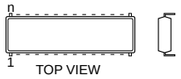
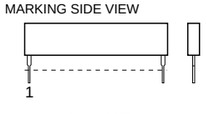
M24C16-MN6T
MM1170BFB



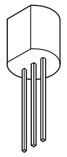
8pin DIP

FA4301

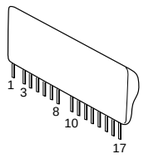


15pin SIP

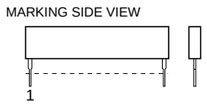
HA17431PA
HA17431PA-TZ



H8D2972

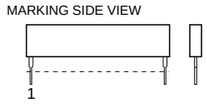


LA6515



10pin SIP

LA7841L



7pin SIP

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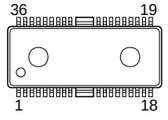

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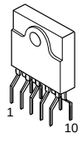

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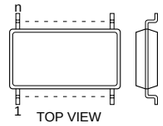
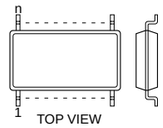


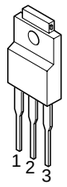
42pin SOP

M52757FP-TP



36pin SOP

µPC2912HF (12)



DTA114GKAT146
DTA114TUA-T106
DTA124EUA-T106
DTA143TKA-T146
DTC114GKA
DTC114GKAT146
DTC123EKA-T146
DTC124EK
DTC124EKA-T146
2SA1036K-Q
2SA1036K-T-146-Q
2SA1037AK-T146-QR
2SA1037AK-T146-R
2SA1162-G
2SB709A-QRS-TX
2SC1623-L5L6
2SC2411K-CQ
2SC2411K-T-146-CQ
2SC2412K-T-146-QR

DTA124ESA
DTA124ESA-TP
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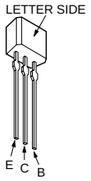
2SA1309A-QRSTA
2SC2459-GR-TPE4
2SC2784
2SC2785-HFE
2SC3311A-QRSTA



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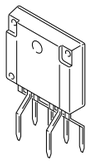

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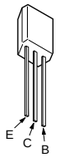
2SC2458TP-YGR



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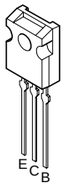

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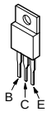

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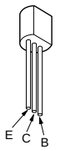

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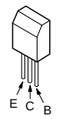

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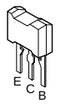

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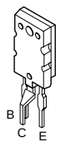

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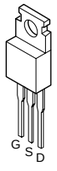

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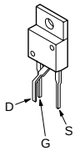
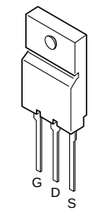
2SK3262-01MR-F119



2SJ360-TE12L

2SK2647-01MR-F91



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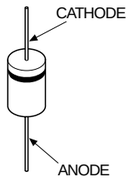
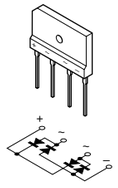
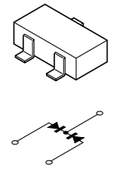
D2S4MTA1



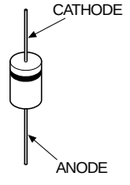
D4SB60L
D4SBL40
D4SBS4
D4SBS4-F



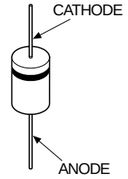
D5SC4M
1PS184-115



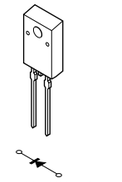
EGP10D
EGP10GPKG23
ERA91-02
ERA91-02TP1



ERA22-06AVRBT
ERA22-08
ERA34-10TP1
ERB38-06V1
GP08D
GP08DPKG23
HSS83TD
P6KE200AG23
RD2.2M-T1B
RGP02-20EL-6394



FMQ-G5GS



HSU83TRF

HZS10NB2TD
HZS12NB2TD
HZS13NB2TD
HZS16NB2TD
HZS33NB2
HZS33NB2TD
HZS4.7NB2
HZS4.7NB2TD
HZS5.1NB2TD
HZS5.6NB2TD
MTZJ-T-77-39B
MTZJ-39B
RD10ESB2
RD12ES-B2
RD12ES-T1B2
RD13ES-B2
RD20ES-B2
RD20ES-T1B2
RD22ES-B2
RD22ES-T1B2
RD5.1ESB2
RD5.6ES-T1B2
RD5.6ESB2
UDZ-TE-17-2.2B
1SS119-25
1SS119-25TD
1SS133T-77

ON3171-R

RD9.1ES-L2
RD9.1ES-T1B

RM11A
RM11C

SPR-325MVW

YG802C09

YG911S3R

1PS181-115

1PS226-115

1SS355TE-17

1SS376TE-17

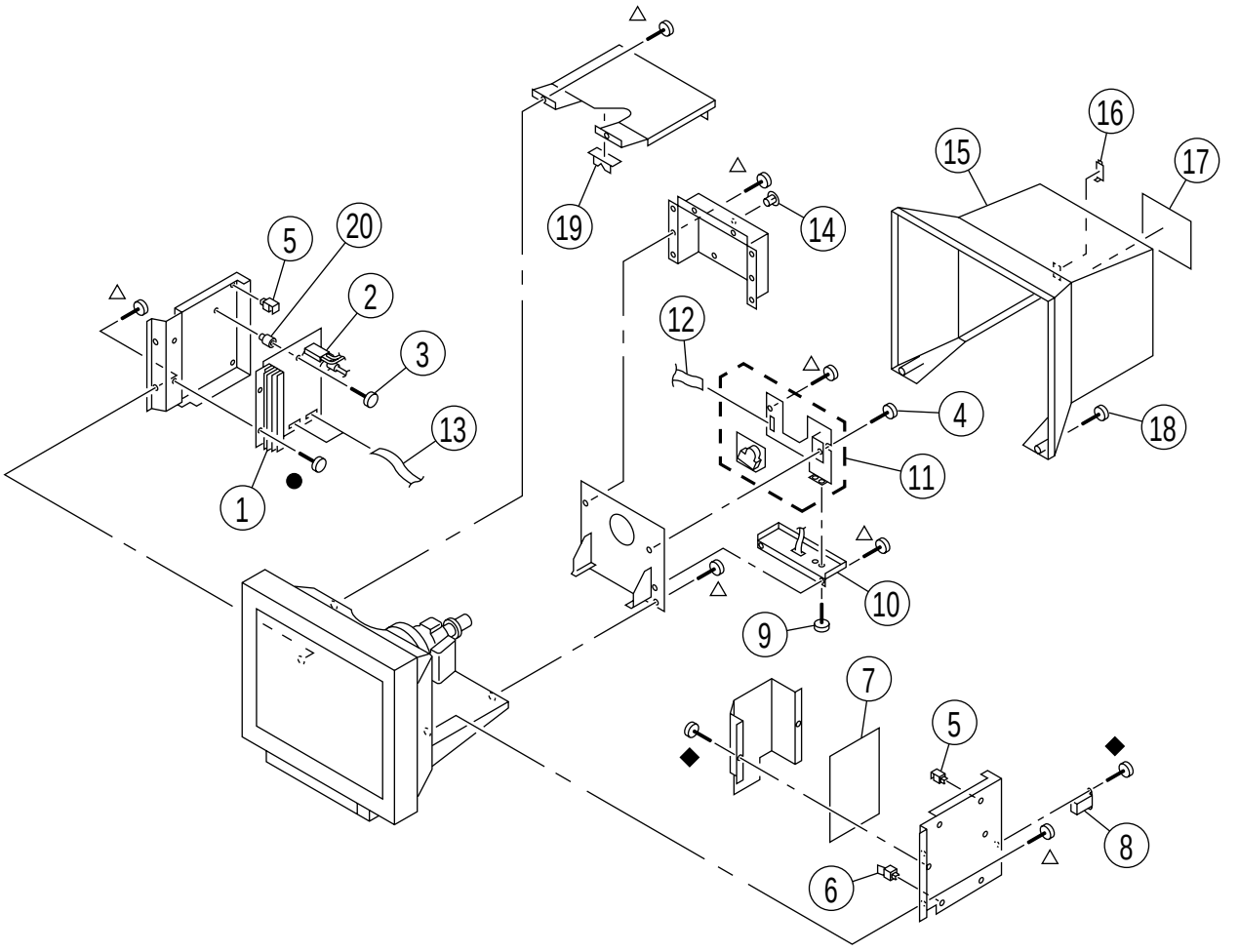
SECTION 6
EXPLODED VIEWS

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified ⚠ marked are critical for safety.
Replace only with the part number specified.

6-1. CHASSIS

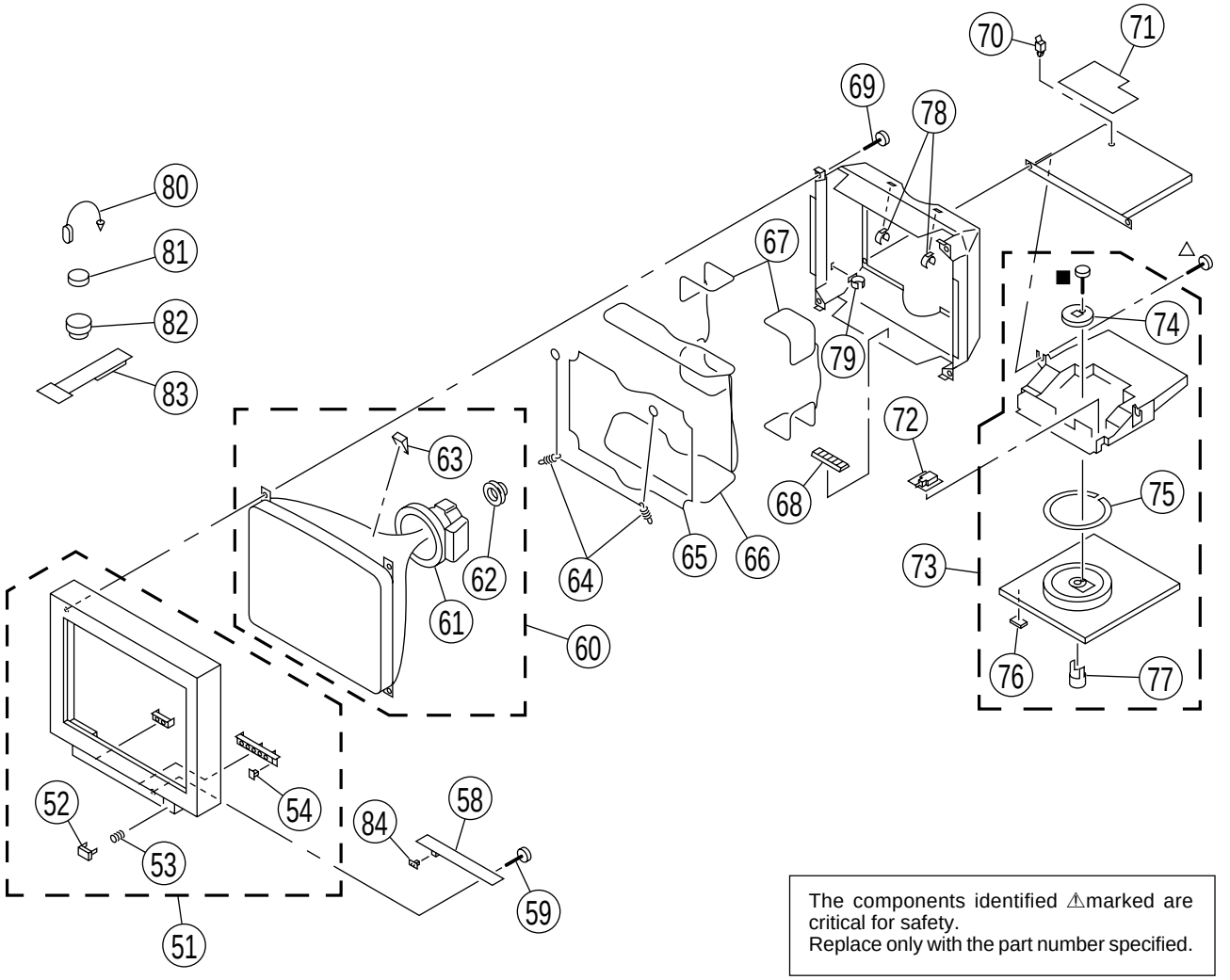
● 7-685-648-79 +BVTP 3X12
◆ 7-685-646-79 +BVTP 3X8
△ 7-685-881-09 +BVTT 4X8



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	* A-1642-264-A	D BOARD, COMPLETE (SSI)	2
2	⚠ X-4560-175-1	TRANSFORMER ASSY, FLYBACK (NX-4502/J1D4)	
3	4-062-115-01	SCREW +P 3.5X20 TYPE2	
4	4-389-025-11	SCREW (M4) (EXT TOOTH WASHER)	
5	* 3-701-903-11	HOLDER, PRINTED CIRCUIT BOARD	
6	4-070-730-01	HOLDER, PRINTED CIRCUIT BOARD	
7	* A-1637-022-A	G BOARD, COMPLETE (SSI)	
8	⚠ 1-251-382-31	INLET, AC 3P (WITH NOISE FILTER)	
9	4-205-206-01	SCREW (HD15)	
10	1-694-561-12	TERMINAL BOARD ASSY, I/O	
11	* A-1298-988-C	A BOARD, COMPLETE	
12	1-900-246-08	CONNECTOR ASSY (F)	
13	1-900-250-06	CONNECTOR ASSY (F)	
14	* 4-069-570-01	SPACER, PRINTED CIRCUIT BOARD	
15	4-073-300-21	CABINET	
16	* 4-204-328-41	COVER, ECS	
17	* 4-205-244-01	LABEL, INFORMATION	
18	4-039-358-01	SCREW (4X16) (+) BV TAPPING	
19	* 4-063-711-01	SUPPORT, HV CABLE	
20	* 4-060-359-01	HOLDER, PRINTED CIRCUIT BOARD	

6-2. PICTURE TUBE

■ 7-685-663-71 +BVTP 4X16
△ 7-685-881-09 +BVTT 4X8

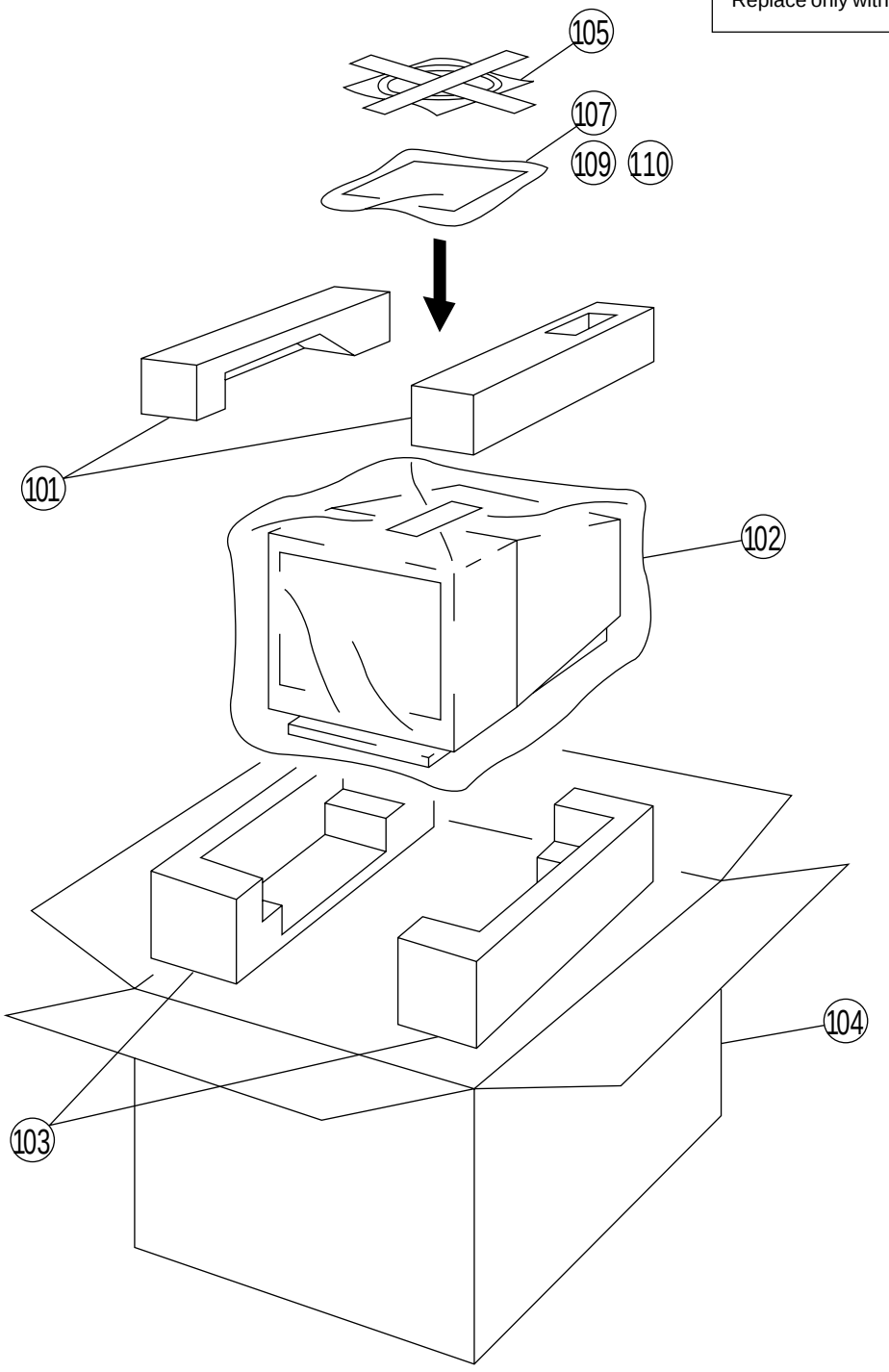


The components identified ⚠marked are critical for safety.
Replace only with the part number specified.

REF.NO.		PART NO.	DESCRIPTION	REMARK
51		X-4200-565-1	BEZEL ASSY	52-56
52		4-073-296-11	BUTTON, POWER	
53		4-042-593-01	SPRING, COMPRESSION	
54		4-073-295-01	BAR, OPTICAL	
#1	55	~~4-073-301-11~~	~~BUTTON, MULTI~~	
#1	56	~~4-073-298-11~~	~~BUTTON, RESET~~	
58	*	A-1372-740-A	H BOARD, COMPLETE	
59		4-029-432-01	SCREW (3X12), (+) BVWHTP	
60		⚠8-738-813-61	ITC ASSY (21TKC-R1)	61-63
61		⚠8-451-509-11	DEFLECTION YOKE (Y21TKM-M)	
62		⚠1-452-912-61	NECK ASSENBLY (NA-2914)	
63		2-162-100-21	SPACER, DEFLECTION YOKE	
64	*	4-047-316-01	SPRING, EXTENSION	
65		⚠1-419-130-21	COIL, LANDING CORRECTION	
66		⚠1-419-128-21	COIL, DEGAUSSING	
67		⚠1-419-129-21	COIL, LANDING CORRECTION	
68		4-062-670-01	SPACER, PICTURE TUBE	
69		4-203-648-01	SCREW (5), SELF TAPPING	
70		4-070-730-01	HOLDER, PRINTED CIRCUIT BOARD	
71	*	A-1394-967-C	N BOARD, COMPLETE	
72	*	8-933-396-00	J BOARD, COMPLETE	
73		X-4200-566-1	STAND ASSY	74-77
74		4-204-326-01	STOPPER (A)	
75	*	4-204-376-01	RING, TILT SWIVEL	
76	*	4-060-533-01	CUSHION	
77		4-072-648-01	STOPPER (B)	
78		4-041-021-02	HOLDER, DEGAUSE COIL	
79		4-071-175-01	HOLDER, DGC	
80		4-308-870-00	CLIP, LEAD WIRE	
81		1-452-032-00	MAGNET, DISK: 10mmϕ	
82		1-452-094-00	MAGNET, ROTATABLE DISK: 15mmϕ	
83		4-051-736-21	PIECE A (90), CONV. CORRECT	
84		4-073-297-01	CAP, INPUT SELECTION SWITCH	

6-3. PACKING MATERIALS

The components identified ⚠ marked are critical for safety.
Replace only with the part number specified.



REF.NO.	PART NO.	DESCRIPTION	REMARK
101	*4-073-356-01	CUSHION (UPPER) (ASSY)	
102	*4-060-490-11	BAG, POLYETHYLENE	
103	*4-073-357-01	CUSHION (LOWER) (ASSY)	
104	*4-205-242-01	CARTON	
105	1-793-504-11	CABLE ASSY (15P D SUB ×2 CONNECTOR)	
107	⚠ 1-782-784-21	CORD SET, POWER	
109	4-205-240-01	INSTRUCTION MANUAL	
110	1-785-512-31	CONNECTOR, D SUB (15P CHANGER)	

SECTION 7
ELECTRICAL PARTS LIST

A

NOTE:

The components identified ⚠ marked are critical for safety.
Replace only with the part number specified.

When indicating parts by reference number, please include the board name.

The components identified by ⧓ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

RESISTORS
- All resistors are in ohms
- F : nonflammable

REF.NO.	PART NO.	DESCRIPTION			REMARK
	* A-1298-988-C	A BOARD, COMPLETE			
		**********			
	7-682-950-01	SCREW +PSW 3X12 (IC403)			
	<CAPACITOR>				
C101	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C102	1-104-664-11	ELECT	47µF	20% 25V	
C103	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C104	1-104-664-11	ELECT	47µF	20% 25V	
C107	1-164-004-11	CERAMIC CHIP	0.1µF	10% 25V	
C108	1-164-004-11	CERAMIC CHIP	0.1µF	10% 25V	
C109	1-163-229-11	CERAMIC CHIP	12pF	5% 50V	
C110	1-163-275-11	CERAMIC CHIP	0.001µF	5% 50V	
C112	1-164-489-11	CERAMIC CHIP	0.22µF	10% 16V	
C113	1-164-489-11	CERAMIC CHIP	0.22µF	10% 16V	
C114	1-164-004-11	CERAMIC CHIP	0.1µF	10% 25V	
C115	1-104-341-11	FILM	0.1µF	10% 250V	
C120	1-104-341-11	FILM	0.1µF	10% 250V	
C201	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C202	1-104-664-11	ELECT	47µF	20% 25V	
C203	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C204	1-104-664-11	ELECT	47µF	20% 25V	
C205	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C206	1-109-982-11	CERAMIC CHIP	1µF	10% 10V	
C207	1-164-004-11	CERAMIC CHIP	0.1µF	10% 25V	
C208	1-164-004-11	CERAMIC CHIP	0.1µF	10% 25V	
C209	1-163-227-11	CERAMIC CHIP	10pF	0.5pF 50V	
C210	1-163-275-11	CERAMIC CHIP	0.001µF	5% 50V	
C212	1-164-489-11	CERAMIC CHIP	0.22µF	10% 16V	
C213	1-164-489-11	CERAMIC CHIP	0.22µF	10% 16V	
C214	1-164-004-11	CERAMIC CHIP	0.1µF	10% 25V	
C215	1-104-341-11	FILM	0.1µF	10% 250V	
C216	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C220	1-104-341-11	FILM	0.1µF	10% 250V	
C301	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C302	1-104-664-11	ELECT	47µF	20% 25V	
C303	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C304	1-104-664-11	ELECT	47µF	20% 25V	
C307	1-164-004-11	CERAMIC CHIP	0.1µF	10% 25V	
C308	1-164-004-11	CERAMIC CHIP	0.1µF	10% 25V	
C309	1-163-227-11	CERAMIC CHIP	10pF	0.5pF 50V	
C310	1-163-275-11	CERAMIC CHIP	0.001µF	5% 50V	
C312	1-164-489-11	CERAMIC CHIP	0.22µF	10% 16V	
C313	1-164-489-11	CERAMIC CHIP	0.22µF	10% 16V	
C314	1-164-004-11	CERAMIC CHIP	0.1µF	10% 25V	
C315	1-104-341-11	FILM	0.1µF	10% 250V	
C320	1-104-341-11	FILM	0.1µF	10% 250V	
C401	1-126-964-11	ELECT	10µF	20% 50V	
C402	1-104-664-11	ELECT	47µF	20% 25V	
C403	1-163-259-91	CERAMIC CHIP	220pF	5% 50V	
C404	1-163-259-91	CERAMIC CHIP	220pF	5% 50V	
C405	1-164-004-11	CERAMIC CHIP	0.1µF	10% 25V	
C406	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C407	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C408	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C410	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C411	1-126-934-11	ELECT	220µF	20% 16V	
C413	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C415	1-164-489-11	CERAMIC CHIP	0.22µF	10% 16V	
C416	1-126-961-11	ELECT	2.2µF	20% 50V	
C417	1-104-574-11	CERAMIC	0.0047µF	10% 2KV	
C419	1-162-318-11	CERAMIC	0.001µF	10% 500V	
C420	1-164-489-11	CERAMIC CHIP	0.22µF	10% 16V	
C421	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C422	1-164-489-11	CERAMIC CHIP	0.22µF	10% 16V	
C423	1-104-664-11	ELECT	47µF	20% 25V	
C424	1-162-318-11	CERAMIC	0.001µF	10% 500V	
C425	1-163-251-11	CERAMIC CHIP	100pF	5% 50V	
C426	1-163-251-11	CERAMIC CHIP	100pF	5% 50V	
C427	1-163-235-11	CERAMIC CHIP	22pF	5% 50V	
C430	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C431	1-163-275-11	CERAMIC CHIP	0.001µF	5% 50V	
C432	1-164-489-11	CERAMIC CHIP	0.22µF	10% 16V	
C433	1-162-318-11	CERAMIC	0.001µF	10% 500V	
C434	1-162-318-11	CERAMIC	0.001µF	10% 500V	
C435	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C436	1-164-489-11	CERAMIC CHIP	0.22µF	10% 16V	
C437	1-126-935-11	ELECT	470µF	20% 16V	
C438	1-115-339-11	CERAMIC CHIP	0.1µF	10% 50V	
C440	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C441	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C442	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C443	1-163-021-91	CERAMIC CHIP	0.01µF	10% 50V	
C444	1-162-318-11	CERAMIC	0.001µF	10% 500V	

A

The components identified ⚠ marked are critical for safety.
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
C446	1-104-664-11	ELECT	47µF	20%	25V
C449	1-109-982-11	CERAMIC CHIP	1µF	10%	10V
C450	1-107-823-11	CERAMIC CHIP	0.47µF	10%	16V
C456	1-164-489-11	CERAMIC CHIP	0.22µF	10%	16V
C457	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C458	1-115-339-11	CERAMIC CHIP	0.1µF	10%	50V
C459	1-128-560-11	ELECT	22µF	20%	100V
C462	1-115-339-11	CERAMIC CHIP	0.1µF	10%	50V
C463	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C464	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C467	1-107-957-11	ELECT	1µF	20%	250V
		<CONNECTOR>			
CN401	1-793-183-11	CONNECTOR, D SUB 15P			
CN402*	1-564-509-11	PLUG, CONNECTOR 6P			
CN403	1-784-463-11	CONNECTOR, FFC/FPC 21P			
CN405*	1-564-524-11	PLUG, CONNECTOR 9P			
CN406*	1-766-179-11	PIN, CONNECTOR (PC BOARD) 2P			
		<DIODE>			
D101	8-719-062-51	DIODE 1PS226-115			
D102	8-719-062-51	DIODE 1PS226-115			
D103	8-719-066-10	DIODE 1PS181-115			
D105	8-719-051-85	DIODE HSS83TD			
D106	8-719-052-12	DIODE 1SS376TE-17			
D107	8-719-052-12	DIODE 1SS376TE-17			
D201	8-719-062-51	DIODE 1PS226-115			
D202	8-719-062-51	DIODE 1PS226-115			
D203	8-719-066-10	DIODE 1PS181-115			
D205	8-719-051-85	DIODE HSS83TD			
D206	8-719-052-12	DIODE 1SS376TE-17			
D207	8-719-052-12	DIODE 1SS376TE-17			
D301	8-719-062-51	DIODE 1PS226-115			
D302	8-719-062-51	DIODE 1PS226-115			
D303	8-719-066-10	DIODE 1PS181-115			
D305	8-719-051-85	DIODE HSS83TD			
D306	8-719-052-12	DIODE 1SS376TE-17			
D307	8-719-052-12	DIODE 1SS376TE-17			
D402	8-719-066-11	DIODE 1PS184-115			
D403	8-719-982-36	ZENER DIODE MTZJ-39B			
D405	8-719-911-19	DIODE 1SS119-25			
D406	8-719-062-51	DIODE 1PS226-115			
D407	8-719-062-51	DIODE 1PS226-115			
		<FERRITE BEAD>			
FB102	1-500-419-22	FERRITE			
FB202	1-500-419-22	FERRITE			
FB302	1-500-419-22	FERRITE			
FB402	1-412-911-11	FERRITE	1.1µH		
FB403	1-412-911-11	FERRITE	1.1µH		
FB404	1-412-911-11	FERRITE	1.1µH		
FB405	1-412-911-11	FERRITE	1.1µH		
FB406	1-412-911-11	FERRITE	1.1µH		
FB411	1-412-911-11	FERRITE	1.1µH		
		<IC>			
IC401	8-759-584-87	IC M52757FP-TP			
IC402	8-759-584-86	IC M52749FP-TP			
IC403	8-749-015-91	IC FA4301			
IC404	8-759-585-72	IC CXD9514M			
IC405	8-759-701-01	IC NJM2904M			
IC406	8-749-015-92	IC H8D2972			
IC407	8-759-925-74	IC SN74HC04ANS			
		<COIL>			
L402	1-412-529-11	INDUCTOR	22µH		
L403	1-412-537-31	INDUCTOR	100µH		
L404	1-414-940-21	INDUCTOR	100µH		
L405	1-412-529-11	INDUCTOR	22µH		
		<IC LINK>			
PS401⚠	1-533-590-31	LINK, IC (1A/90V AC, 60V DC)			
		<TRANSISTOR>			
Q101	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q201	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q301	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q401	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q402	8-729-050-41	TRANSISTOR 2SJ360TE12L			
Q406	8-729-216-22	TRANSISTOR 2SA1162-G			
Q407	8-729-028-74	TRANSISTOR DTA114TUA-T106			
Q410	8-729-032-61	TRANSISTOR 2SC5022-02			
		<RESISTOR>			
R101	1-215-394-00	METAL	75	1%	1/4W
R103	1-215-394-00	METAL	75	1%	1/4W
R105	1-216-017-91	RES-CHIP	47	5%	1/10W
R106	1-216-017-91	RES-CHIP	47	5%	1/10W
R107	1-216-045-00	RES-CHIP	680	5%	1/10W
R109	1-216-678-11	METAL CHIP	13K	0.5%	1/10W
R110	1-216-097-91	RES-CHIP	100K	5%	1/10W
R111	1-216-041-00	RES-CHIP	470	5%	1/10W
R112	1-216-009-91	RES-CHIP	22	5%	1/10W
R113	1-216-017-91	RES-CHIP	47	5%	1/10W
R114	1-216-009-91	RES-CHIP	22	5%	1/10W
R115	1-219-742-11	CARBON	47	5%	1/2W
R116	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R117	1-216-121-91	RES-CHIP	1M	5%	1/10W
R118	1-216-121-91	RES-CHIP	1M	5%	1/10W
R119	1-216-077-91	RES-CHIP	15K	5%	1/10W
R120	1-216-113-00	RES-CHIP	470K	5%	1/10W
R121	1-216-113-00	RES-CHIP	470K	5%	1/10W
R122	1-216-081-00	RES-CHIP	22K	5%	1/10W
R128	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R130	1-216-113-00	RES-CHIP	470K	5%	1/10W

REF.NO.	PART NO.	DESCRIPTION			REMARK
R137	1-249-413-11	CARBON	470	5%	1/4W
R138	1-216-017-91	RES-CHIP	47	5%	1/10W
R161	1-216-041-00	RES-CHIP	470	5%	1/10W
R201	1-215-394-00	METAL	75	1%	1/4W
R202	1-216-097-91	RES-CHIP	100K	5%	1/10W
R203	1-215-394-00	METAL	75	1%	1/4W
R205	1-216-017-91	RES-CHIP	47	5%	1/10W
R206	1-216-017-91	RES-CHIP	47	5%	1/10W
R207	1-216-045-00	RES-CHIP	680	5%	1/10W
R209	1-216-678-11	METAL CHIP	13K	0.5%	1/10W
R210	1-216-097-91	RES-CHIP	100K	5%	1/10W
R211	1-216-033-00	RES-CHIP	220	5%	1/10W
R212	1-216-009-91	RES-CHIP	22	5%	1/10W
R213	1-216-017-91	RES-CHIP	47	5%	1/10W
R214	1-216-009-91	RES-CHIP	22	5%	1/10W
R215	1-219-742-11	CARBON	47	5%	1/2W
R216	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R217	1-216-121-91	RES-CHIP	1M	5%	1/10W
R218	1-216-121-91	RES-CHIP	1M	5%	1/10W
R219	1-216-077-91	RES-CHIP	15K	5%	1/10W
R220	1-216-113-00	RES-CHIP	470K	5%	1/10W
R221	1-216-113-00	RES-CHIP	470K	5%	1/10W
R222	1-216-081-00	RES-CHIP	22K	5%	1/10W
R228	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R230	1-216-113-00	RES-CHIP	470K	5%	1/10W
R237	1-249-413-11	CARBON	470	5%	1/4W
R238	1-216-017-91	RES-CHIP	47	5%	1/10W
R261	1-216-041-00	RES-CHIP	470	5%	1/10W
R301	1-215-394-00	METAL	75	1%	1/4W
R303	1-215-394-00	METAL	75	1%	1/4W
R305	1-216-017-91	RES-CHIP	47	5%	1/10W
R306	1-216-017-91	RES-CHIP	47	5%	1/10W
R307	1-216-045-00	RES-CHIP	680	5%	1/10W
R309	1-216-678-11	METAL CHIP	13K	0.5%	1/10W
R310	1-216-097-91	RES-CHIP	100K	5%	1/10W
R311	1-216-033-00	RES-CHIP	220	5%	1/10W
R312	1-216-009-91	RES-CHIP	22	5%	1/10W
R313	1-216-017-91	RES-CHIP	47	5%	1/10W
R314	1-216-009-91	RES-CHIP	22	5%	1/10W
R315	1-219-742-11	CARBON	47	5%	1/2W
R316	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R317	1-216-121-91	RES-CHIP	1M	5%	1/10W
R318	1-216-121-91	RES-CHIP	1M	5%	1/10W
R319	1-216-077-91	RES-CHIP	15K	5%	1/10W
R320	1-216-113-00	RES-CHIP	470K	5%	1/10W
R321	1-216-113-00	RES-CHIP	470K	5%	1/10W
R322	1-216-081-00	RES-CHIP	22K	5%	1/10W
R328	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R330	1-216-113-00	RES-CHIP	470K	5%	1/10W
R337	1-249-413-11	CARBON	470	5%	1/4W
R338	1-216-017-91	RES-CHIP	47	5%	1/10W
R361	1-216-041-00	RES-CHIP	470	5%	1/10W
R402	1-216-049-91	RES-CHIP	1K	5%	1/10W
R403	1-216-081-00	RES-CHIP	22K	5%	1/10W
R404	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R405	1-216-045-00	RES-CHIP	680	5%	1/10W
R406	1-216-097-91	RES-CHIP	100K	5%	1/10W
R407	1-218-768-11	METAL CHIP	470K	0.5%	1/10W
R409	1-216-129-00	RES-CHIP	2.2M	5%	1/10W
R411	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R412	1-216-105-91	RES-CHIP	220K	5%	1/10W
R413	1-216-097-91	RES-CHIP	100K	5%	1/10W
R414	1-216-089-91	RES-CHIP	47K	5%	1/10W
R415	1-216-097-91	RES-CHIP	100K	5%	1/10W
R417	1-216-121-91	RES-CHIP	1M	5%	1/10W
R418	1-260-127-11	CARBON	220K	5%	1/2W
R419	1-216-033-00	RES-CHIP	220	5%	1/10W
R420	1-216-025-91	RES-CHIP	100	5%	1/10W
R421	1-216-025-91	RES-CHIP	100	5%	1/10W
R422	1-216-025-91	RES-CHIP	100	5%	1/10W
R424	1-216-049-91	RES-CHIP	1K	5%	1/10W
R425	1-216-049-91	RES-CHIP	1K	5%	1/10W
R426	1-216-105-91	RES-CHIP	220K	5%	1/10W
R427	1-216-049-91	RES-CHIP	1K	5%	1/10W
R428	1-216-025-91	RES-CHIP	100	5%	1/10W
R430	1-216-025-91	RES-CHIP	100	5%	1/10W
R431	1-216-113-00	RES-CHIP	470K	5%	1/10W
R436	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R438	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R439	1-216-041-00	RES-CHIP	470	5%	1/10W
R441	1-216-121-91	RES-CHIP	1M	5%	1/10W
R442	1-216-049-91	RES-CHIP	1K	5%	1/10W
R443	1-216-025-91	RES-CHIP	100	5%	1/10W
R444	1-216-025-91	RES-CHIP	100	5%	1/10W
R445	1-216-025-91	RES-CHIP	100	5%	1/10W
R446	1-216-025-91	RES-CHIP	100	5%	1/10W
R447	1-216-017-91	RES-CHIP	47	5%	1/10W
R448	1-216-017-91	RES-CHIP	47	5%	1/10W
R449	1-216-081-00	RES-CHIP	22K	5%	1/10W
R450	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R451	1-216-115-00	RES-CHIP	560K	5%	1/10W
R453	1-216-073-00	RES-CHIP	10K	5%	1/10W
R454	1-216-129-00	RES-CHIP	2.2M	5%	1/10W
R455	1-216-097-91	RES-CHIP	100K	5%	1/10W
R456	1-216-025-91	RES-CHIP	100	5%	1/10W
R457	1-211-895-11	METAL	10M	10%	1/4W
R458	1-219-398-51	METAL	2.2M	5%	1W
R459	1-211-895-11	METAL	10M	10%	1/4W
R460	1-216-073-00	RES-CHIP	10K	5%	1/10W
R461	1-216-105-91	RES-CHIP	220K	5%	1/10W
R463	1-216-097-91	RES-CHIP	100K	5%	1/10W
R464	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R488	1-216-089-91	RES-CHIP	47K	5%	1/10W
R490	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R491	1-216-065-91	RES-CHIP	4.7K	5%	1/10W

<SPARK GAP>

SG101	1-576-354-21	GAP, SPARK
SG201	1-576-354-21	GAP, SPARK
SG301	1-576-354-21	GAP, SPARK

A G

The components identified ⚠ marked are critical for safety.
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
SG401	1-576-354-21	GAP, SPARK			
SG402	1-519-422-11	GAP, SPARK			
		<SOCKET>			
SK401	⚠ 1-451-499-11	SOCKET, PICTURE TUBE			
		<CRYSTAL>			
X401	1-781-472-21	VIBRATOR, CERAMIC (8MHz)			
**********					
	* A-1637-022-A	G BOARD, COMPLETE (SSI)			
		**********			
	1-533-223-11	HOLDER, FUSE (F601)			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
		(D610, D652, D680, IC610, IC654, Q603, Q630)			
		<CAPACITOR>			
C601	⚠ 1-113-513-11	FILM	1µF	20%	275V
C602	⚠ 1-113-513-11	FILM	1µF	20%	275V
C603	⚠ 1-113-900-51	CERAMIC	470pF	10%	250V
C604	⚠ 1-113-900-51	CERAMIC	470pF	10%	250V
C605	⚠ 1-113-926-91	CERAMIC	0.0047µF		250V
C606	⚠ 1-113-926-91	CERAMIC	0.0047µF		250V
C607	1-113-900-11	CERAMIC	470pF	10%	250V
C610	1-117-849-11	ELECT	330µF	20%	450V
C611	1-137-479-11	FILM	1µF	10%	400V
C612	1-136-169-00	FILM	0.22µF	5%	50V
C613	1-126-967-11	ELECT	47µF	20%	50V
C614	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
C620	1-128-990-11	FILM	27000pF	5%	800V
C621	1-104-330-91	CERAMIC	470pF	10%	1KV
C622	1-104-330-91	CERAMIC	470pF	10%	1KV
C623	1-136-171-00	FILM	0.33µF	5%	50V
C624	1-136-171-00	FILM	0.33µF	5%	50V
C625	1-136-167-00	FILM	0.15µF	5%	50V
C626	1-136-167-00	FILM	0.15µF	5%	50V
C627	1-104-330-91	CERAMIC	470pF	10%	1KV
C629	1-137-370-11	FILM	0.01µF	5%	50V
C630	1-163-005-11	CERAMIC CHIP	470pF	10%	50V
C631	1-104-665-11	ELECT	100µF	20%	25V
C633	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V
C634	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
C650	1-107-656-11	ELECT	100µF	20%	250V
C651	1-107-651-11	ELECT	4.7µF	20%	250V
C652	1-128-563-11	ELECT	100µF	20%	100V
C653	1-128-581-11	ELECT	4.7µF	20%	100V
C654	1-126-943-11	ELECT	2200µF	20%	25V
C655	1-104-664-11	ELECT	47µF	20%	25V
C656	1-126-943-11	ELECT	2200µF	20%	25V
C657	1-104-664-11	ELECT	47µF	20%	25V
C658	1-126-927-11	ELECT	2200µF	20%	10V
C659	1-128-339-11	ELECT	2200µF	20%	10V
C660	1-126-967-11	ELECT	47µF	20%	50V
C661	1-107-429-11	CERAMIC	0.0022µF	10%	1KV
C662	1-137-370-11	FILM	0.01µF	5%	50V
C663	1-126-965-11	ELECT	22µF	20%	50V
C665	1-107-909-11	ELECT	47µF	20%	10V
C666	1-126-964-11	ELECT	10µF	20%	50V
C667	1-107-909-11	ELECT	47µF	20%	16V
C680	1-115-747-51	ELECT	0.0068F	20%	10V
C681	1-104-664-11	ELECT	47µF	20%	10V
C682	1-137-368-11	FILM	0.0047µF	5%	50V
C683	1-104-664-11	ELECT	47µF	20%	10V
C684	1-128-526-11	ELECT	100µF	20%	10V
C685	1-128-526-11	ELECT	100µF	20%	10V
C686	1-104-664-11	ELECT	47µF	20%	10V
C687	1-126-964-11	ELECT	10µF	20%	50V
C692	1-115-339-11	CERAMIC CHIP	0.1µF	10%	50V
		<CONNECTOR>			
CN601	* 1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P			
CN602	* 1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P			
CN603	* 1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P			
CN650	* 1-564-510-11	PLUG, CONNECTOR 7P			
CN652	* 1-564-512-11	PLUG, CONNECTOR 9P			
CN653	* 1-564-509-11	PLUG, CONNECTOR 6P			
CN654	* 1-564-511-11	PLUG, CONNECTOR 8P			
		<DIODE>			
D610	⚠ 8-719-510-53	DIODE D4SB60L			
D612	8-719-911-19	DIODE 1SS119-25			
D613	8-719-304-63	DIODE RM11C			
D620	8-719-911-19	DIODE 1SS119-25			
D631	8-719-063-73	DIODE D1NL20U-TR			
D632	8-719-059-23	DIODE P6KE200AG23			
D633	8-719-069-63	DIODE ERB38-06V1			
D634	8-719-911-19	DIODE 1SS119-25			
D635	8-719-110-53	ZENER DIODE RD20ESB2			
D637	8-719-911-19	DIODE 1SS119-25			
D650	8-719-064-49	DIODE D4SBL40			
D651	8-719-063-73	DIODE D1NL20U-TR			
D652	8-719-052-91	DIODE D4SBS4-F			
D653	8-719-022-97	DIODE D2S4MF			
D654	8-719-022-97	DIODE D2S4MF			
D655	8-719-063-73	DIODE D1NL20U-TR			
D656	8-719-911-19	DIODE 1SS119-25			
D660	8-719-110-57	ZENER DIODE RD22ESB2			
D661	8-719-110-31	ZENER DIODE RD12ESB2			
D663	8-719-911-19	DIODE 1SS119-25			
D664	8-719-110-57	ZENER DIODE RD22ESB2			
D665	8-719-911-19	DIODE 1SS119-25			
D666	8-719-911-19	DIODE 1SS119-25			
D680	8-719-989-87	DIODE YG802C09			

The components identified ⚠ marked are critical for safety.
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
D681	8-719-109-89	ZENER DIODE RD5.6ESB2	
D682	8-719-121-26	ZENER DIODE RD9.1ESL2	
D683	8-719-911-19	DIODE 1SS119-25	
D690	8-719-911-19	DIODE 1SS119-25	
D692	8-719-911-19	DIODE 1SS119-25	
		<FUSE>	
F601 ⚠	1-576-233-11	FUSE (H.B.C.) (6.3A/250V)	
		<FERRITE BEAD>	
FB630	1-410-396-41	FERRITE 0.45µH	
FB632 ⚠	1-410-397-31	FERRITE 1.1µH	
		<IC>	
IC610	8-749-015-89	IC MZ1530	
IC630	8-759-535-32	IC FA13842P	
IC650	8-749-012-49	IC DM-57N	
IC651	8-759-592-79	IC BA00AST-V5	
IC652	8-759-496-15	IC BA05ST-V5	
IC653	8-759-450-47	IC BA05T	
IC654	8-759-643-66	IC µPC2912HF (12)	
IC680	8-759-321-95	IC HA17431PA	
		<COIL>	
L610	1-419-126-21	COIL, CHOKE (AFC) 216µH	
L611	1-411-674-11	INDUCTOR 68µH	
L650	1-414-742-21	INDUCTOR 22µH	
L651	1-414-742-21	INDUCTOR 22µH	
L652	1-412-529-11	INDUCTOR 22µH	
L653	1-412-529-11	INDUCTOR 22µH	
L680	1-414-742-21	INDUCTOR 22µH	
		<PHOTO COUPLER>	
PH620	8-749-924-35	PHOTO COUPLER ON3171-R	
PH630	8-749-924-35	PHOTO COUPLER ON3171-R	
		<IC LINK>	
PS650⚠	1-533-593-31	LINK, IC (2A/90V AC, 60V DC)	
		<TRANSISTOR>	
Q603	8-729-045-39	TRANSISTOR MX0842AB-F	
Q610	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q621	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q630	8-729-045-03	TRANSISTOR 2SK2647-01MR-F91	
Q631	8-729-041-66	TRANSISTOR 2SC4015TV2	
Q632	8-729-041-66	TRANSISTOR 2SC4015TV2	
Q633	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q650	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q651	8-729-230-45	TRANSISTOR 2SC2458-YGR	
Q652	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q653	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q654	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q667	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q670	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q671	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q691	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		<RESISTOR>	
R601 ⚠	1-220-825-91	CARBON 330K 5% 1/2W	
R602	1-216-465-11	METAL OXIDE 27K 5% 2W	F
R603	1-247-895-91	CARBON 470K 5% 1/4W	
R604	1-216-113-00	RES-CHIP 470K 5% 1/10W	
R605	1-216-113-00	RES-CHIP 470K 5% 1/10W	
R606	1-216-097-91	RES-CHIP 100K 5% 1/10W	
R607	1-216-097-91	RES-CHIP 100K 5% 1/10W	
R608	1-216-073-00	RES-CHIP 10K 5% 1/10W	
R609	1-216-069-00	RES-CHIP 6.8K 5% 1/10W	
R610	1-217-152-00	METAL 0.33 10% 2W	
R611	1-217-153-00	METAL 0.47 10% 2W	
R612	1-249-429-11	CARBON 10K 5% 1/4W	
R613	1-216-089-91	RES-CHIP 47K 5% 1/10W	
R614	1-247-807-31	CARBON 100 5% 1/4W	
R615	1-249-427-11	CARBON 6.8K 5% 1/4W	
R616	1-216-671-11	METAL CHIP 6.8K 0.5% 1/10W	
R617	1-249-417-11	CARBON 1K 5% 1/4W	
R618	1-216-369-00	METAL OXIDE 1 5% 2W	F
R620	1-202-933-61	FUSIBLE 0.1 10% 1/2W	F
R621	1-249-432-11	CARBON 18K 5% 1/4W	
R622	1-216-089-91	RES-CHIP 47K 5% 1/10W	
R623	1-218-642-11	METAL OXIDE 100K 5% 1W	F
R624	1-218-642-11	METAL OXIDE 100K 5% 1W	F
R625	1-216-349-00	METAL OXIDE 1 5% 1W	F
R626	1-216-349-00	METAL OXIDE 1 5% 1W	F
R627	1-216-683-11	METAL CHIP 22K 0.5% 1/10W	
R628	1-216-695-11	METAL CHIP 68K 0.5% 1/10W	
R629	1-216-683-11	METAL CHIP 22K 0.5% 1/10W	
R630	1-249-387-11	CARBON 3.3 5% 1/4W	F
R632	1-215-399-00	METAL 120 1% 1/4W	
R633	1-260-135-11	CARBON 1M 5% 1/2W	
R634	1-260-135-11	CARBON 1M 5% 1/2W	
R635	1-216-465-11	METAL OXIDE 27K 5% 2W	F
R636	1-247-863-91	CARBON 22K 5% 1/4W	
R637	1-219-134-11	FUSIBLE 0.1 10% 1/4W	
R638	1-219-134-11	FUSIBLE 0.1 10% 1/4W	
R649	1-249-437-11	CARBON 47K 5% 1/4W	F
R650	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
R652	1-216-113-00	RES-CHIP 470K 5% 1/10W	
R653	1-249-413-11	CARBON 470 5% 1/4W	
R654	1-211-796-11	FUSIBLE 1 5% 1/2W	F
R655	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	
R656	1-260-292-11	CARBON 1 5% 1/2W	
R657	1-249-443-11	CARBON 0.47 5% 1/4W	F
R658	1-216-073-00	RES-CHIP 10K 5% 1/10W	

G D

The components identified ⚠ marked are critical for safety.
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
R659	1-216-049-91	RES-CHIP	1K	5%	1/10W
R660	1-216-073-00	RES-CHIP	10K	5%	1/10W
R661	1-247-807-31	CARBON	100	5%	1/4W
R662	1-216-073-00	RES-CHIP	10K	5%	1/10W
R663	1-216-073-00	RES-CHIP	10K	5%	1/10W
R664	1-216-073-00	RES-CHIP	10K	5%	1/10W
R665	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R666	1-216-073-00	RES-CHIP	10K	5%	1/10W
R667	1-216-089-91	RES-CHIP	47K	5%	1/10W
R668	1-215-457-00	METAL	33K	1%	1/4W
R670	1-216-677-11	METAL CHIP	12K	0.5%	1/10W
R671	1-216-677-11	METAL CHIP	12K	0.5%	1/10W
R672	1-216-664-11	METAL CHIP	3.6K	0.5%	1/10W
R673	1-216-073-00	RES-CHIP	10K	5%	1/10W
R674	1-216-097-91	RES-CHIP	100K	5%	1/10W
R675	1-216-668-11	METAL CHIP	5.1K	0.5%	1/10W
R676	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R677	1-216-661-11	METAL CHIP	2.7K	0.5%	1/10W
R678	1-216-391-11	METAL OXIDE	1.5	5%	3W F
R680	1-215-475-00	METAL	180K	1%	1/4W
R681	1-216-073-00	RES-CHIP	10K	5%	1/10W
R682	1-216-049-91	RES-CHIP	1K	5%	1/10W
R683	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R684	1-216-073-00	RES-CHIP	10K	5%	1/10W
R685	1-216-049-91	RES-CHIP	1K	5%	1/10W
R686	1-216-033-00	RES-CHIP	220	5%	1/10W
R687	1-216-081-00	RES-CHIP	22K	5%	1/10W
R688	1-215-473-00	METAL	150K	1%	1/4W
R693	1-260-085-11	CARBON	68	5%	1/2W
R694	1-216-073-00	RES-CHIP	10K	5%	1/10W
R695	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R696	1-249-407-11	CARBON	150	5%	1/4W

<RELAY>

RY602 ⚠ 1-755-318-11 RELAY, POWER
RY603 ⚠ 1-755-067-21 RELAY

<SPARK GAP>

SG601 ⚠ 1-533-982-11 GAP, SPARK

<TRANSFORMER>

T601 ⚠ 1-429-180-11 TRANSFORMER, LINE FILTER
T620 1-433-894-11 TRANSFORMER, CONVERTER (PIT)
T621 1-429-992-11 TRANSFORMER, CONVERTER (PRT)
T630 1-433-895-31 TRANSFORMER, CONVERTER (SRT)

<THERMISTOR>

TH601 ⚠ 1-809-260-11 THERMISTOR, POWER
THP601 ⚠ 1-809-827-31 THERMISTOR, POSITIVE

<VARISTOR>

VDR601 ⚠ 1-801-268-51 VARISTOR TNR14V471K660
VDR602 ⚠ 1-810-622-11 VARISTOR

****

* A-1642-264-A D BOARD, COMPLETE (SSI)
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3-710-578-01 COVER, VOLUME, 6 MOLD (RV901)
4-070-828-01 INSULATING SHEET (Q515)
4-070-829-02 INSULATING SHEET (IC502)
4-070-830-01 INSULATING SHEET (IC701)
4-382-854-11 SCREW (M3X10), P, SW (+)
(IC701, Q704, Q705, Q905, Q906, R918)

7-685-647-79 SCREW +BVTP 3X10 TYPE2 TT(B)
(D511, IC502, Q508, Q515, R547)

<CAPACITOR>

C501	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C502	1-136-169-00	FILM	0.22µF	5%	50V
C503	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C504	1-163-017-00	CERAMIC CHIP	0.0047µF	10%	50V
C505	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C506	1-137-194-81	FILM	0.47µF	5%	50V
C507	1-136-169-00	FILM	0.22µF	5%	50V
C508	1-126-965-11	ELECT	22µF	20%	50V
C509	1-117-670-31	FILM	0.82µF	5%	250V
C510	1-117-398-11	ELECT	33µF	20%	250V
C511	1-163-113-00	CERAMIC CHIP	68pF	5%	50V
C512	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
C513	1-163-017-00	CERAMIC CHIP	0.0047µF	10%	50V
C514	1-106-375-12	MYLAR	0.022µF		200V
C515	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C516	1-126-935-11	ELECT	470µF	20%	16V
C517	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C518	1-137-194-81	FILM	0.47µF	5%	50V
C519	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C520	1-107-914-11	ELECT	1000µF	20%	25V
C521	1-117-666-11	FILM	0.39µF	5%	250V
C522	1-137-368-11	FILM	0.0047µF	5%	50V
C523	1-137-368-11	FILM	0.0047µF	5%	50V
C524	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
C525	1-104-760-11	CERAMIC CHIP	0.047µF	10%	50V
C526	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C527	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C528	1-117-663-31	FILM	0.22µF	5%	250V
C529	1-104-665-11	ELECT	100µF	20%	25V
C530	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C531	1-107-846-11	FILM	0.1µF	5%	250V
C532	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
C533	1-107-889-11	ELECT	220µF	20%	25V
C534	1-107-889-11	ELECT	220µF	20%	25V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C535	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C536	1-126-967-11	ELECT	47µF	20%	50V
C537	1-113-694-11	FILM	0.056µF	5%	400V
C538	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C539	1-163-017-00	CERAMIC CHIP	0.0047µF	10%	50V
C540	1-106-343-00	MYLAR	0.001µF	10%	200V
C541	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V
C542	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C543	1-135-350-11	FILM	3600pF	3%	1.8KV
C544	1-125-925-11	FILM MELF	0.027µF	5%	400V
C545	1-107-597-11	CERAMIC	22pF	5%	500V
C546	1-107-444-11	CERAMIC	100pF	5%	2KV
C547	1-130-061-91	FILM	0.0015µF	5%	630V
C548	1-162-134-11	CERAMIC	470pF	10%	2KV
C549	1-130-495-00	FILM	0.1µF	5%	50V
C550	1-127-833-11	FILM	0.15µF	5%	400V
C551	1-163-017-00	CERAMIC CHIP	0.0047µF	10%	50V
C552	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C554	1-107-444-11	CERAMIC	100pF	5%	2KV
C555	1-107-683-11	ELECT	2.2µF	0	250V
C556	1-115-356-11	FILM	1.2µF	5%	250V
C557	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C558	1-104-665-11	ELECT	100µF	20%	25V
C559	1-107-649-11	ELECT	2.2µF	20%	250V
C560	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C561	1-104-664-11	ELECT	47µF	20%	25V
C562	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C563	1-163-011-11	CERAMIC CHIP	0.0015µF	10%	50V
C564	1-126-960-11	ELECT	1µF	20%	50V
C565	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C566	1-137-370-11	FILM	0.01µF	5%	50V
C567	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V
C568	1-104-760-11	CERAMIC CHIP	0.047µF	10%	50V
C571	1-163-227-11	CERAMIC CHIP	10pF	0.5pF	50V
C572	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
C573	1-106-375-12	MYLAR	0.022µF		200V
C574	1-163-017-00	CERAMIC CHIP	0.0047µF	10%	50V
C575	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C577	1-126-964-11	ELECT	10µF	20%	50V
C701	1-128-560-11	ELECT	22µF	20%	100V
C702	1-128-562-11	ELECT	47µF	20%	100V
C703	1-104-331-11	CERAMIC	0.0022µF	10%	1KV
C704	1-104-568-11	CERAMIC	470pF	10%	2KV
C706	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C707	1-130-495-00	FILM	0.1µF	5%	50V
C708	1-126-942-61	ELECT	1000µF	20%	25V
C709	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C710	1-107-894-11	ELECT	220µF	20%	35V
C711	1-163-019-00	CERAMIC CHIP	0.0068µF	10%	50V
C712	1-106-228-00	MYLAR	0.22µF	10%	100V
C713	1-126-942-61	ELECT	1000µF	20%	25V
C715	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C720	1-126-964-11	ELECT	10µF	20%	50V
C901	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C902	1-104-665-11	ELECT	100µF	20%	25V
C903	1-126-964-11	ELECT	10µF	20%	50V
C905	1-163-127-00	CERAMIC CHIP	270pF	5%	50V
C907	1-163-257-11	CERAMIC CHIP	180pF	5%	50V
C908	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C909	1-126-935-11	ELECT	470µF	20%	16V
C910	1-126-962-11	ELECT	3.3µF	20%	50V
C912	1-106-383-00	MYLAR	0.047µF	10%	200V
C913	1-119-748-11	ELECT	33µF	20%	400V
C914	1-106-383-00	MYLAR	0.047µF	10%	200V
C915	1-136-169-00	FILM	0.22µF	5%	50V
C916	1-117-626-11	FILM	2000pF	3%	1.2KV
C917	1-117-665-11	FILM	0.33µF	5%	250V
C918	1-106-359-00	MYLAR	0.0047µF	10%	100V
C919	1-115-350-51	CERAMIC	0.0047µF		2KV
C920	1-137-372-11	FILM	0.022µF	5%	50V
C921	1-106-228-00	MYLAR	0.22µF	10%	100V
C922	1-106-220-00	MYLAR	0.1µF	10%	100V
C923	1-106-355-12	MYLAR	0.0033µF	10%	200V
C924	1-106-220-00	MYLAR	0.1µF	10%	100V
C925	1-126-967-11	ELECT	47µF	20%	50V
C926	1-126-964-11	ELECT	10µF	20%	50V
C927	1-163-243-11	CERAMIC CHIP	47pF	5%	50V
C928	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
C929	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C930	1-163-227-11	CERAMIC CHIP	10pF	0.5pF	50V
C931	1-126-964-11	ELECT	10µF	20%	50V
C932	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C933	1-126-960-11	ELECT	1µF	20%	50V
C935	1-163-275-11	CERAMIC CHIP	0.001µF	5%	50V

<CONNECTOR>

CN501*	1-564-509-11	PLUG, CONNECTOR 6P
CN502*	1-564-510-11	PLUG, CONNECTOR 7P
CN503*	1-508-879-11	BASE POST
CN504	1-784-786-11	CONNECTOR, FFC 25P
CN505	1-784-786-11	CONNECTOR, FFC 25P
CN506	1-764-101-11	PIN, CONNECTOR (PC BOARD) 2P
CN508*	1-564-511-11	PLUG, CONNECTOR 8P
CN509*	1-778-955-11	PIN, CONNECTOR (PC BOARD) 10P

<DIODE>

D504	8-719-988-61	DIODE 1SS355TE-17
D505	8-719-110-36	ZENER DIODE RD13ESB2
D506	8-719-991-33	DIODE 1SS133T-77
D507	8-719-063-89	DIODE YG911S3R
D508	8-719-031-79	DIODE D5SC4M
D509	8-719-991-33	DIODE 1SS133T-77
D510	8-719-109-85	ZENER DIODE RD5.1ESB2
D511	8-719-066-36	DIODE FMQ-G5GS
D512	8-719-988-61	DIODE 1SS355TE-17
D513	8-719-991-33	DIODE 1SS133T-77
D514	8-719-991-33	DIODE 1SS133T-77
D515	8-719-109-89	ZENER DIODE RD5.6ESB2
D516	8-719-991-33	DIODE 1SS133T-77
D517	8-719-951-30	DIODE ERA91-02

D

REF.NO.	PART NO.	DESCRIPTION	REMARK
D519	8-719-988-61	DIODE 1SS355TE-17	
D520	8-719-988-61	DIODE 1SS355TE-17	
D522	8-719-988-61	DIODE 1SS355TE-17	
D701	8-719-991-33	DIODE 1SS133T-77	
D702	8-719-991-33	DIODE 1SS133T-77	
D703	8-719-991-33	DIODE 1SS133T-77	
D706	8-719-979-58	DIODE EGP10D	
D707	8-719-109-85	ZENER DIODE RD5.1ESB2	
D708	8-719-908-03	DIODE GP08D	
D709	8-719-948-45	DIODE ERA22-08	
D710	8-719-109-85	ZENER DIODE RD5.1ESB2	
D901	8-719-991-33	DIODE 1SS133T-77	
D902	8-719-110-31	ZENER DIODE RD12ESB2	
D904	8-719-988-61	DIODE 1SS355TE-17	
D905	8-719-110-36	ZENER DIODE RD13ESB2	
D906	8-719-063-89	DIODE YG911S3R	
D907	8-719-930-97	ZENER DIODE HZS16NB2TD	
D908	8-719-018-82	DIODE RGP02-20EL-6394	
D909	8-719-930-97	ZENER DIODE HZS16NB2TD	
D910	8-719-991-33	DIODE 1SS133T-77	
D912	8-719-979-58	DIODE EGP10D	
D913	8-719-991-33	DIODE 1SS133T-77	
D914	8-719-991-33	DIODE 1SS133T-77	
D915	8-719-929-72	ZENER DIODE HZS33NB2	
D917	8-719-988-61	DIODE 1SS355TE-17	
D918	8-719-991-33	DIODE 1SS133T-77	
D919	8-719-991-33	DIODE 1SS133T-77	
D920	8-719-928-85	ZENER DIODE HZS4.7NB2	
D921	8-719-988-61	DIODE 1SS355TE-17	
D922	8-719-018-82	DIODE RGP02-20EL-6394	
D923	8-719-988-61	DIODE 1SS355TE-17	
		<FERRITE BEAD>	
FB501	1-410-397-21	FERRITE 1.1µH	
FB502	1-410-397-21	FERRITE 1.1µH	
FB503	1-412-911-11	FERRITE 1.1µH	
FB504	1-412-911-11	FERRITE 1.1µH	
FB505	1-412-911-11	FERRITE 1.1µH	
FB506	1-410-397-21	FERRITE 1.1µH	
FB507	1-410-397-21	FERRITE 1.1µH	
FB901	1-410-397-21	FERRITE 1.1µH	
		<IC>	
IC501	8-759-585-82	IC BA9759F-E2	
IC502	8-759-803-42	IC LA6500-FA	
IC503	8-759-058-50	IC XRA10324AF	
IC701	8-759-444-82	IC LA7841L	
IC901	8-759-585-81	IC BA9758FS-E2	
		<CHIP CONDUCTOR>	
JR002	1-216-296-91	SHORT 0	
JR003	1-216-295-91	SHORT 0	
JR004	1-216-295-91	SHORT 0	
JR005	1-216-296-91	SHORT 0	
JR006	1-216-295-91	SHORT 0	
JR008	1-216-295-91	SHORT 0	
JR009	1-216-295-91	SHORT 0	
JR010	1-216-295-91	SHORT 0	
JR011	1-216-295-91	SHORT 0	
JR012	1-216-296-91	SHORT 0	
JR013	1-216-295-91	SHORT 0	
JR014	1-216-296-91	SHORT 0	
JR015	1-216-296-91	SHORT 0	
JR016	1-216-295-91	SHORT 0	
		<COIL>	
L501	1-412-537-31	INDUCTOR 100µH	
L502	1-406-673-11	COIL, CHOKE 2.2mH	
L503	1-406-671-11	COIL, CHOKE 1mH	
L504	1-406-675-11	COIL, CHOKE 4.7mH	
L505	1-416-401-31	COIL, CHOKE 5mH	
L901	1-412-537-31	INDUCTOR 100µH	
L902	1-406-660-41	COIL, CHOKE 15µH	
		<TRANSISTOR>	
Q501	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119	
Q502	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q503	8-729-901-97	TRANSISTOR 2SA1036K-Q	
Q504	8-729-901-87	TRANSISTOR 2SC2411K-CQ	
Q505	8-729-901-97	TRANSISTOR 2SA1036K-Q	
Q506	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119	
Q507	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119	
Q508	8-729-048-53	TRANSISTOR 2SJ569LS-CB11	
Q509	8-729-820-73	TRANSISTOR 2SC3746	
Q510	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119	
Q511	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119	
Q512	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119	
Q513	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119	
Q514	8-729-140-50	TRANSISTOR 2SC3209LK	
Q515	8-729-048-48	TRANSISTOR 2SC5570 (LBSONY)	
Q516	8-729-024-95	TRANSISTOR 2SB1565EF	
Q517	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119	
Q518	8-729-019-01	TRANSISTOR 2SD2394-EF	
Q519	8-729-033-25	TRANSISTOR DTC114GKA	
Q520	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q521	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q522	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q523	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q524	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q525	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119	
Q526	8-729-027-35	TRANSISTOR DTA143TKA-T146	
Q701	8-729-800-32	TRANSISTOR 2SC2362K-G	
Q702	8-729-178-43	TRANSISTOR 2SC2784-E	
Q703	8-729-204-91	TRANSISTOR 2SA1049-GR	
Q704	8-729-207-82	TRANSISTOR 2SC3421-Y	
Q705	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q706	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q707	8-729-046-80	TRANSISTOR 2SC4634LS-CB11	

REF.NO.	PART NO.	DESCRIPTION			REMARK
Q903	8-729-901-87	TRANSISTOR 2SC2411K-CQ			
Q904	8-729-901-97	TRANSISTOR 2SA1036K-Q			
Q905	8-729-048-53	TRANSISTOR 2SJ569LS-CB11			
Q906	8-729-044-21	TRANSISTOR 2SK2655-01R-F165			
Q907	8-729-033-26	TRANSISTOR DTA114GKAT146			
Q908	8-729-033-25	TRANSISTOR DTC114GKA			
		<RESISTOR>			
R501	1-215-884-11	METAL OXIDE	47	5% 2W	F
R502	1-216-059-00	RES-CHIP	2.7K	5% 1/10W	
R503	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R504	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R505	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R506	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R507	1-216-097-91	RES-CHIP	100K	5% 1/10W	
R508	1-247-815-91	CARBON	220	5% 1/4W	
R509	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R510	1-216-675-91	METAL CHIP	10K	0.5% 1/10W	
R511	1-216-065-91	RES-CHIP	4.7K	5% 1/10W	
R512	1-215-453-00	METAL	22K	1% 1/4W	
R513	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R514	1-216-097-91	RES-CHIP	100K	5% 1/10W	
R515	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R516	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R517	1-216-687-11	METAL CHIP	33K	0.5% 1/10W	
R518	1-216-691-11	METAL CHIP	47K	0.5% 1/10W	
R519	1-216-081-00	RES-CHIP	22K	5% 1/10W	
R520	1-247-791-91	CARBON	22	5% 1/4W	
R521	1-216-667-11	METAL CHIP	4.7K	0.5% 1/10W	
R522	1-249-437-11	CARBON	47K	5% 1/4W	
R523	1-216-033-00	RES-CHIP	220	5% 1/10W	
R524	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R525	1-216-065-91	RES-CHIP	4.7K	5% 1/10W	
R526	1-216-097-91	RES-CHIP	100K	5% 1/10W	
R527	1-216-673-11	METAL CHIP	8.2K	0.5% 1/10W	
R528	1-216-677-11	METAL CHIP	12K	0.5% 1/10W	
R529	1-216-057-00	RES-CHIP	2.2K	5% 1/10W	
R530	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R531	1-216-097-91	RES-CHIP	100K	5% 1/10W	
R532	1-215-860-11	METAL OXIDE	33	5% 1W	F
R533	1-211-796-11	FUSIBLE	1	5% 1/2W	F
R534	1-216-689-11	METAL CHIP	39K	0.5% 1/10W	
R535	1-216-065-91	RES-CHIP	4.7K	5% 1/10W	
R536	1-216-683-11	METAL CHIP	22K	0.5% 1/10W	
R537	1-249-437-11	CARBON	47K	5% 1/4W	
R538	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R539	1-216-097-91	RES-CHIP	100K	5% 1/10W	
R540	1-215-909-11	METAL OXIDE	47	5% 3W	F
R541	1-216-295-91	SHORT	0		
R542	1-249-437-11	CARBON	47K	5% 1/4W	
R543	1-216-677-11	METAL CHIP	12K	0.5% 1/10W	
R544	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R545	1-216-097-91	RES-CHIP	100K	5% 1/10W	
R546	1-216-381-11	METAL OXIDE	0.22	5% 3W	F
R547	1-219-726-11	METAL	2.2	5% 10W	
R548	1-249-437-11	CARBON	47K	5% 1/4W	
R549	1-260-288-11	CARBON	0.47	5% 1/2W	
R550	1-260-288-11	CARBON	0.47	5% 1/2W	
R551	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R552	1-216-097-91	RES-CHIP	100K	5% 1/10W	
R553	1-247-815-91	CARBON	220	5% 1/4W	
R554	1-216-679-11	METAL CHIP	15K	0.5% 1/10W	
R555	1-216-675-91	METAL CHIP	10K	0.5% 1/10W	
R556	1-216-683-11	METAL CHIP	22K	0.5% 1/10W	
R557	1-216-423-11	METAL OXIDE	27	5% 1W	F
R558	1-249-437-11	CARBON	47K	5% 1/4W	
R559	1-216-073-00	RES-CHIP	10K	5% 1/10W	
R560	1-216-675-91	METAL CHIP	10K	0.5% 1/10W	
R561	1-215-443-00	METAL	8.2K	1% 1/4W	
R562	1-216-677-11	METAL CHIP	12K	0.5% 1/10W	
R563	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R564	1-216-677-11	METAL CHIP	12K	0.5% 1/10W	
R565	1-216-097-91	RES-CHIP	100K	5% 1/10W	
R566	1-216-687-11	METAL CHIP	33K	0.5% 1/10W	
R567	1-214-840-00	METAL	100	1% 1/2W	
R568	1-216-665-11	METAL CHIP	3.9K	0.5% 1/10W	
R569	1-216-691-11	METAL CHIP	47K	0.5% 1/10W	
R570	1-260-332-51	CARBON	2.2K	5% 1/2W	
R571	1-249-425-11	CARBON	4.7K	5% 1/4W	
R572	1-216-385-11	METAL OXIDE	0.47	5% 3W	F
R573	1-249-437-11	CARBON	47K	5% 1/4W	
R574	1-216-097-91	RES-CHIP	100K	5% 1/10W	
R575	1-216-672-11	METAL CHIP	7.5K	0.5% 1/10W	
R576	1-215-869-11	METAL OXIDE	1K	5% 1W	F
R577	1-260-310-71	CARBON	33	5% 1/2W	
R578	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R579	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R580	1-214-840-00	METAL	100	1% 1/2W	
R581	1-260-316-51	CARBON	100	5% 1/2W	
R582	1-214-840-00	METAL	100	1% 1/2W	
R583	1-249-437-11	CARBON	47K	5% 1/4W	
R584	1-249-437-11	CARBON	47K	5% 1/4W	
R585	1-216-073-00	RES-CHIP	10K	5% 1/10W	
R586	1-216-683-11	METAL CHIP	22K	0.5% 1/10W	
R587	1-215-886-11	METAL OXIDE	100	5% 2W	F
R588	1-260-085-11	CARBON	68	5% 1/2W	
R589	1-216-057-00	RES-CHIP	2.2K	5% 1/10W	
R590	1-216-057-00	RES-CHIP	2.2K	5% 1/10W	
R591	1-247-807-31	CARBON	100	5% 1/4W	
R593	1-216-073-00	RES-CHIP	10K	5% 1/10W	
R594	1-216-683-11	METAL CHIP	22K	0.5% 1/10W	
R595	1-216-659-11	METAL CHIP	2.2K	0.5% 1/10W	
R597	1-216-073-00	RES-CHIP	10K	5% 1/10W	
R598	1-216-675-91	METAL CHIP	10K	0.5% 1/10W	
R599	1-216-657-11	METAL CHIP	1.8K	0.5% 1/10W	
R701	1-216-049-91	RES-CHIP	1K	5% 1/10W	
R702	1-249-393-11	CARBON	10	5% 1/4W	F
R703	1-215-459-00	METAL	39K	1% 1/4W	
R704	1-216-655-11	METAL CHIP	1.5K	0.5% 1/10W	
R705	1-249-413-11	CARBON	470	5% 1/4W	F

The components identified by ⋈ in this manual have been carefully factory-selected for eachset in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

The components identified ⚠ marked are critical for safety.
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
R706	1-249-389-11	CARBON	4.7	5%	1/4W F
R707	1-249-389-11	CARBON	4.7	5%	1/4W F
R708	1-215-881-11	METAL OXIDE	15	5%	2W F
R709	1-216-049-91	RES-CHIP	1K	5%	1/10W
R710	1-216-073-00	RES-CHIP	10K	5%	1/10W
R711	1-216-049-91	RES-CHIP	1K	5%	1/10W
R713	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R714	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R715	1-249-389-11	CARBON	4.7	5%	1/4W F
R716	1-216-689-11	RES-CHIP	39K	5%	1/10W
R717	1-216-073-00	RES-CHIP	10K	5%	1/10W
R718	1-216-681-11	METAL CHIP	18K	0.5%	1/10W
R719	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R720	1-216-073-00	RES-CHIP	10K	5%	1/10W
R721	1-216-073-00	RES-CHIP	10K	5%	1/10W
R722	1-260-292-11	CARBON	1	5%	1/2W
R723	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R724	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R725	1-214-798-21	METAL	1.8	1%	1/2W
R726	1-214-798-21	METAL	1.8	1%	1/2W
R727	1-249-381-11	CARBON	1	5%	1/4W F
R728	1-215-865-11	METAL OXIDE	220	5%	1W F
R729	1-260-292-11	CARBON	1	5%	1/2W
R730	1-216-073-00	RES-CHIP	10K	5%	1/10W
R731	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R732	1-219-510-11	CARBON	470K	5%	1/2W
R901	1-216-097-91	RES-CHIP	100K	5%	1/10W
R902	1-216-117-00	RES-CHIP	680K	5%	1/10W
R903	1-216-089-91	RES-CHIP	47K	5%	1/10W
R904	1-216-033-00	RES-CHIP	220	5%	1/10W
R906	1-216-033-00	RES-CHIP	220	5%	1/10W
R907	1-216-081-00	RES-CHIP	22K	5%	1/10W
R908	1-216-399-00	METAL OXIDE	6.8	5%	3W F
R911	1-216-041-00	RES-CHIP	470	5%	1/10W
R912	1-216-049-91	RES-CHIP	1K	5%	1/10W
R914	1-247-791-91	CARBON	22	5%	1/4W
R915	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R916	1-249-397-11	CARBON	22	5%	1/4W F
R917	1-211-824-71	FUSIBLE	220	5%	1/2W F
R918	1-219-727-11	METAL	68	5%	10W
R919	1-219-748-11	CARBON	4.7K	5%	1/2W
R920	1-216-089-91	RES-CHIP	47K	5%	1/10W
R921	1-249-429-11	CARBON	10K	5%	1/4W
R922	1-249-389-11	CARBON	4.7	5%	1/4W F
R923	1-218-762-11	METAL CHIP	270K	0.5%	1/10W
R924	1-216-073-00	RES-CHIP	10K	5%	1/10W
R925	1-220-825-11	CARBON	330K	5%	1/2W
R926	1-219-746-11	CARBON	1K	5%	1/2W
R927	1-219-746-11	CARBON	1K	5%	1/2W
R928	1-216-668-11	METAL CHIP	5.1K	0.5%	1/10W
R929	1-216-675-91	METAL CHIP	10K	0.5%	1/10W
R930	1-216-653-11	METAL CHIP	1.2K	0.5%	1/10W
R931	1-216-653-11	METAL CHIP	1.2K	0.5%	1/10W
R932	1-216-049-91	RES-CHIP	1K	5%	1/10W
R933	1-216-687-11	METAL CHIP	33K	0.5%	1/10W
R934	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W
R935	1-216-089-91	RES-CHIP	47K	5%	1/10W
R937	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R939	1-216-049-91	RES-CHIP	1K	5%	1/10W
R940	1-216-073-00	RES-CHIP	10K	5%	1/10W
R941	1-216-025-91	RES-CHIP	100	5%	1/10W
R943	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R945	1-216-025-91	RES-CHIP	100	5%	1/10W
R1501	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1502	1-216-033-00	RES-CHIP	220	5%	1/10W
R1503	1-216-682-11	METAL CHIP	20K	0.5%	1/10W
R1504	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W
R1505	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W
R1506	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1507	1-216-097-91	RES-CHIP	100K	5%	1/10W
R1510	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1515	1-215-909-11	METAL OXIDE	47	5%	3W F
R1517	1-216-089-91	RES-CHIP	47K	5%	1/10W
R1518	1-216-025-91	RES-CHIP	100	5%	1/10W

<VARIABLE RESISTOR>

⋈ RV901 ⚠	1-241-767-21	RES, ADJ, CERMET	100K (HV ADJ)

<RELAY>

RY501	1-755-198-11	RELAY

<SPARK GAP>

SG901	1-517-499-21	GAP, SPARK
SG902	1-519-422-11	GAP, SPARK
SG903	1-519-422-11	GAP, SPARK

<TRANSFORMER>

T501	1-435-070-11	TRANSFORMER, HORIZONTAL DRIVE
T502	1-429-301-11	TRANSFORMER, FERRITE (HCT)
T503	1-431-413-21	TRANSFORMER, FERRITE (HST)
T505	1-419-127-11	COIL, HORIZONTAL LINEARITY
T701	1-431-414-11	TRANSFORMER, FERRITE (DFT)
T901	1-416-402-11	INDUCTOR 500µH
T902 ⚠	X-4560-175-1	TRANSFORMER ASSY, FLYBACK (NX-4502//J1D4)

<THERMISTOR>

TH501	1-807-796-11	THERMISTOR
TH502	1-807-796-11	THERMISTOR

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The components identified ⚠ marked are critical for safety.
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
	* A-1372-740-A	H BOARD, COMPLETE			
		**********			
		<CAPACITOR>			
C810	1-126-791-11	ELECT	10µF	20%	16V
C814	1-126-786-11	ELECT	47µF	20%	16V
		<CONNECTOR>			
CN801	* 1-564-526-11	PLUG, CONNECTOR 11P			
		<DIODE>			
D801	8-719-064-11	DIODE SPR-325MVW			
		<TRANSISTOR>			
Q801	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q802	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q803	8-729-029-40	TRANSISTOR DTA124ESA			
Q804	8-729-029-40	TRANSISTOR DTA124ESA			
		<RESISTOR>			
R801	1-249-425-11	CARBON	4.7K	5%	1/4W
R802	1-249-417-11	CARBON	1K	5%	1/4W
R803	1-249-417-11	CARBON	1K	5%	1/4W
R804	1-249-421-11	CARBON	2.2K	5%	1/4W
R805	1-249-421-11	CARBON	2.2K	5%	1/4W
R806	1-249-425-11	CARBON	4.7K	5%	1/4W
R807	1-249-429-11	CARBON	10K	5%	1/4W
R811	1-249-429-11	CARBON	10K	5%	1/4W
R812	1-249-429-11	CARBON	10K	5%	1/4W
R813	1-247-863-91	CARBON	22K	5%	1/4W
R814	1-249-441-11	CARBON	100K	5%	1/4W
R815	1-249-429-11	CARBON	10K	5%	1/4W
R821	1-249-407-11	CARBON	150	5%	1/4W
R822	1-249-413-11	CARBON	470	5%	1/4W
R823	1-249-417-11	CARBON	1K	5%	1/4W
R824	1-249-419-11	CARBON	1.5K	5%	1/4W
		<SWITCH>			
S800	1-571-588-11	SWITCH, SLIDE (INPUT1/INPUT2)			
S801	1-692-431-21	SWITCH, TACTILE (RESET)			
S802	1-692-431-21	SWITCH, TACTILE (ASC)			
S803	1-692-431-21	SWITCH, TACTILE (V-)			
S804	1-692-431-21	SWITCH, TACTILE (V+)			
S805	1-692-431-21	SWITCH, TACTILE (MENU)			
S806	1-692-431-21	SWITCH, TACTILE (H-)			
S807	1-692-431-21	SWITCH, TACTILE (H+)			
		<THERMISTOR>			
TH801	1-807-796-11	THERMISTOR			

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	* 8-933-396-00	J BOARD, COMPLETE			
		**********			
		<CONNECTOR>			
CN891	* 1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P			
		<SWITCH>			
S891	⚠ 1-571-433-31	SWITCH, PUSH (AC POWER)			

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	* A-1394-967-C	N BOARD, COMPLETE			
		**********			
		<CAPACITOR>			
C001	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
C002	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
C003	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C005	1-163-255-91	CERAMIC CHIP	150pF	5%	50V
C006	1-163-235-11	CERAMIC CHIP	22pF	5%	50V
C007	1-163-235-11	CERAMIC CHIP	22pF	5%	50V
C008	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C009	1-115-339-11	CERAMIC CHIP	0.1µF	10%	50V
C010	1-126-967-11	ELECT	47µF	20%	50V
C011	1-115-339-11	CERAMIC CHIP	0.1µF	10%	50V
C012	1-126-967-11	ELECT	47µF	20%	50V
C013	1-126-965-11	ELECT	22µF	20%	50V
C014	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C015	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C016	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C017	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C018	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C019	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C020	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C021	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C022	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C023	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C024	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V
C025	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
C026	1-104-665-11	ELECT	100µF	20%	25V
C027	1-115-339-11	CERAMIC CHIP	0.1µF	10%	50V
C028	1-163-220-11	CERAMIC CHIP	3pF	0.25pF	50V
C029	1-163-241-11	CERAMIC CHIP	39pF	5%	50V
C031	1-126-964-11	ELECT	10µF	20%	50V

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REF.NO.	PART NO.	DESCRIPTION			REMARK
C033	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C036	1-163-037-11	CERAMIC CHIP 0.022µF	10%	50V	
C037	1-126-964-11	ELECT 10µF	20%	50V	
C038	1-126-964-11	ELECT 10µF	20%	50V	
C039	1-126-964-11	ELECT 10µF	20%	50V	
C040	1-126-964-11	ELECT 10µF	20%	50V	
C041	1-126-964-11	ELECT 10µF	20%	50V	
C042	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C043	1-126-965-11	ELECT 22µF	20%	50V	
C044	1-163-037-11	CERAMIC CHIP 0.022µF	10%	50V	
C045	1-163-037-11	CERAMIC CHIP 0.022µF	10%	50V	
C046	1-163-037-11	CERAMIC CHIP 0.022µF	10%	50V	
C047	1-163-037-11	CERAMIC CHIP 0.022µF	10%	50V	
C048	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C049	1-126-964-11	ELECT 10µF	20%	50V	
C050	1-126-964-11	ELECT 10µF	20%	50V	
C051	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C052	1-126-933-11	ELECT 100µF	20%	16V	
C053	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C054	1-115-339-11	CERAMIC CHIP 0.1µF	10%	50V	
C055	1-104-664-11	ELECT 47µF	20%	25V	
C056	1-126-965-11	ELECT 22µF	20%	50V	
C057	1-126-964-11	ELECT 10µF	20%	50V	
C058	1-164-690-91	CERAMIC CHIP 0.0022µF	5%	50V	
C059	1-126-964-11	ELECT 10µF	20%	50V	
C061	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C062	1-126-925-11	ELECT 470µF	20%	10V	
C063	1-164-690-91	CERAMIC CHIP 0.0022µF	5%	50V	
C064	1-115-419-11	CERAMIC CHIP 3300pF	5%	25V	
C065	1-126-960-11	ELECT 1µF	20%	50V	
C066	1-164-690-91	CERAMIC CHIP 0.0022µF	5%	50V	
C067	1-164-004-11	CERAMIC CHIP 0.1µF	10%	25V	
C068	1-136-169-00	FILM 0.22µF	5%	50V	
C069	1-115-339-11	CERAMIC CHIP 0.1µF	10%	50V	
C070	1-126-767-11	ELECT 1000µF	20%	16V	
C071	1-163-007-11	CERAMIC CHIP 680pF	10%	50V	
C072	1-126-942-61	ELECT 1000µF	20%	25V	
C073	1-115-339-11	CERAMIC CHIP 0.1µF	10%	50V	
C074	1-163-137-00	CERAMIC CHIP 680pF	5%	50V	
C075	1-163-251-11	CERAMIC CHIP 100pF	5%	50V	
C077	1-115-339-11	CERAMIC CHIP 0.1µF	10%	50V	
C078	1-136-169-00	FILM 0.22µF	5%	50V	
C079	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C080	1-126-967-11	ELECT 47µF	20%	50V	
C082	1-104-664-11	ELECT 47µF	20%	25V	
C083	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C084	1-126-964-11	ELECT 10µF	20%	50V	
C085	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C086	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C087	1-126-964-11	ELECT 10µF	20%	50V	
C089	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C090	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C091	1-126-933-11	ELECT 100µF	20%	16V	
C094	1-164-004-11	CERAMIC CHIP 0.1µF	10%	25V	
C095	1-117-722-11	ELECT 2200µF	20%	10V	
C096	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C097	1-126-964-11	ELECT 10µF	20%	50V	
C098	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C099	1-164-004-11	CERAMIC CHIP 0.1µF	10%	25V	
C1003	1-104-664-11	ELECT 47µF	20%	25V	
C1004	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C1005	1-163-005-11	CERAMIC CHIP 470pF	10%	50V	
C1006	1-164-161-11	CERAMIC CHIP 0.0022µF	10%	50V	
C1007	1-115-339-11	CERAMIC CHIP 0.1µF	10%	50V	
C5002	1-126-964-11	ELECT 10µF	20%	50V	
C5003	1-126-933-11	ELECT 100µF	20%	16V	
C5004	1-104-664-11	ELECT 47µF	20%	25V	
C5005	1-104-664-11	ELECT 47µF	20%	25V	
C5008	1-104-664-11	ELECT 47µF	20%	25V	
C5009	1-164-004-11	CERAMIC CHIP 0.1µF	10%	25V	
C5101	1-164-004-11	CERAMIC CHIP 0.1µF	10%	25V	
C5103	1-164-004-11	CERAMIC CHIP 0.1µF	10%	25V	
C5105	1-104-664-11	ELECT 47µF	20%	25V	
C5106	1-164-004-11	CERAMIC CHIP 0.1µF	10%	25V	
C5108	1-164-004-11	CERAMIC CHIP 0.1µF	10%	25V	
C5110	1-104-664-11	ELECT 47µF	20%	25V	
C5203	1-164-004-11	CERAMIC CHIP 0.1µF	10%	25V	
C5205	1-164-004-11	CERAMIC CHIP 0.1µF	10%	25V	
C5206	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C5301	1-164-004-11	CERAMIC CHIP 0.1µF	10%	25V	
C5303	1-164-004-11	CERAMIC CHIP 0.1µF	10%	25V	
C5304	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C5305	1-104-664-11	ELECT 47µF	20%	25V	
C5306	1-164-004-11	CERAMIC CHIP 0.1µF	10%	25V	
C5308	1-164-004-11	CERAMIC CHIP 0.1µF	10%	25V	
C5310	1-104-664-11	ELECT 47µF	20%	25V	
C5401	1-164-004-11	CERAMIC CHIP 0.1µF	10%	25V	
C5403	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C5404	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C5406	1-164-004-11	CERAMIC CHIP 0.1µF	10%	25V	
C5408	1-163-005-11	CERAMIC CHIP 470pF	10%	50V	
C5409	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C5413	1-164-004-11	CERAMIC CHIP 0.1µF	10%	25V	
C5501	1-126-967-11	ELECT 47µF	20%	50V	
C5602	1-115-339-11	CERAMIC CHIP 0.1µF	10%	50V	
C5606	1-163-021-91	CERAMIC CHIP 0.01µF	10%	50V	
C5607	1-164-004-11	CERAMIC CHIP 0.1µF	10%	25V	

<CONNECTOR>

CN001	1-784-500-11	CONNECTOR, FFC/FPC 21P	
CN002*	1-564-511-11	PLUG, CONNECTOR 8P	
CN007*	1-564-512-11	PLUG, CONNECTOR 9P	
CN010	1-784-786-11	CONNECTOR, FFC 25P	
CN011	1-784-786-11	CONNECTOR, FFC 25P	
CN5001*	1-564-509-11	PLUG, CONNECTOR 6P	
CN5002*	1-564-511-11	PLUG, CONNECTOR 8P	
CN5003*	1-564-505-11	PLUG, CONNECTOR 2P	

<DIODE>

D001	8-719-062-51	DIODE 1PS226-115	

REF.NO.	PART NO.	DESCRIPTION	REMARK
D002	8-719-062-51	DIODE 1PS226-115	
D003	8-719-062-51	DIODE 1PS226-115	
D004	8-719-062-51	DIODE 1PS226-115	
D005	8-719-109-89	ZENER DIODE RD5.6ESB2	
D006	8-719-109-89	ZENER DIODE RD5.6ESB2	
D007	8-719-109-89	ZENER DIODE RD5.6ESB2	
D008	8-719-109-89	ZENER DIODE RD5.6ESB2	
D009	8-719-109-89	ZENER DIODE RD5.6ESB2	
D010	8-719-109-89	ZENER DIODE RD5.6ESB2	
D011	8-719-109-89	ZENER DIODE RD5.6ESB2	
D012	8-719-109-89	ZENER DIODE RD5.6ESB2	
D013	8-719-110-17	ZENER DIODE RD10ESB2	
D014	8-719-066-11	DIODE 1PS184-115	
D015	8-719-066-11	DIODE 1PS184-115	
D016	8-719-109-89	ZENER DIODE RD5.6ESB2	
D017	8-719-109-89	ZENER DIODE RD5.6ESB2	
D018	8-719-109-89	ZENER DIODE RD5.6ESB2	
D020	8-719-988-61	DIODE 1SS355TE-17	
D021	8-719-988-61	DIODE 1SS355TE-17	
D022	8-719-066-11	DIODE 1PS184-115	
D023	8-719-066-11	DIODE 1PS184-115	
D024	8-719-066-11	DIODE 1PS184-115	
D025	8-719-062-51	DIODE 1PS226-115	
D026	8-719-062-51	DIODE 1PS226-115	
D027	8-719-988-61	DIODE 1SS355TE-17	
D028	8-719-988-61	DIODE 1SS355TE-17	
D029	8-719-109-85	ZENER DIODE RD5.1ESB2	
D036	8-719-109-89	ZENER DIODE RD5.6ESB2	
D037	8-719-109-89	ZENER DIODE RD5.1ESB2	
D038	8-719-045-99	ZENER DIODE RD2.2M-T1B	
		<FERRITE BEAD>	
FB001	1-410-397-21	FERRITE 1.1µH	
FB002	1-410-397-21	FERRITE 1.1µH	
FB003	1-410-397-21	FERRITE 1.1µH	
FB5101	1-412-911-11	FERRITE 1.1µH	
FB5103	1-412-911-11	FERRITE 1.1µH	
FB5201	1-412-911-11	FERRITE 1.1µH	
FB5301	1-412-911-11	FERRITE 1.1µH	
FB5303	1-412-911-11	FERRITE 1.1µH	
FB5401	1-412-911-11	FERRITE 1.1µH	
FB5403	1-412-911-11	FERRITE 1.1µH	
FB5601	1-412-911-11	FERRITE 1.1µH	
		<SENSOR>	
GS5001	1-418-473-11	SENSOR UNIT, GEOMAGNETIC	
		<IC>	
IC001	8-759-650-79	IC CXD8744Q-0006	
IC002	8-759-162-80	IC MM1170BFB	
IC003	8-759-527-77	IC M24C16-MN6T	
IC004	8-759-639-81	IC SN74AHCT74PWR	
IC005	8-759-639-81	IC SN74AHCT74PWR	
IC006	8-759-700-78	IC NJM082M	
IC010	8-759-585-70	IC LA7865M-TLM	
IC011	8-759-442-20	IC 24LC21AT/SN	
IC012	8-759-442-20	IC 24LC21AT/SN	
IC5101	8-759-822-07	IC LA6515	
IC5201	8-759-822-07	IC LA6515	
IC5301	8-759-822-07	IC LA6515	
IC5401	8-759-822-07	IC LA6515	
		<COIL>	
L002	1-406-665-11	COIL, CHOKE 100µH	
L003	1-406-671-11	COIL, CHOKE 1mH	
		<TRANSISTOR>	
Q001	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q002	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q003	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q004	8-729-028-83	TRANSISTOR DTA124EUA-T106	
Q005	8-729-033-26	TRANSISTOR DTA114GKAT146	
Q006	8-729-027-49	TRANSISTOR DTC123EKA-T146	
Q007	8-729-901-00	TRANSISTOR DTC124EK	
Q008	8-729-033-25	TRANSISTOR DTC114GKA	
Q010	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q011	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q012	8-729-901-00	TRANSISTOR DTC124EK	
		<RESISTOR>	
R003	1-216-025-91	RES-CHIP 100 5% 1/10W	
R004	1-216-025-91	RES-CHIP 100 5% 1/10W	
R005	1-216-025-91	RES-CHIP 100 5% 1/10W	
R006	1-216-025-91	RES-CHIP 100 5% 1/10W	
R007	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
R008	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
R009	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
R010	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
R011	1-249-389-11	CARBON 4.7 5% 1/4W F	
R012	1-216-017-91	RES-CHIP 47 5% 1/10W	
R013	1-216-017-91	RES-CHIP 47 5% 1/10W	
R014	1-216-049-91	RES-CHIP 1K 5% 1/10W	
R015	1-249-389-11	CARBON 4.7 5% 1/4W F	
R016	1-216-017-91	RES-CHIP 47 5% 1/10W	
R017	1-216-017-91	RES-CHIP 47 5% 1/10W	
R018	1-216-049-91	RES-CHIP 1K 5% 1/10W	
R019	1-216-025-91	RES-CHIP 100 5% 1/10W	
R020	1-216-025-91	RES-CHIP 100 5% 1/10W	
R021	1-216-025-91	RES-CHIP 100 5% 1/10W	
R022	1-216-025-91	RES-CHIP 100 5% 1/10W	
R023	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	
R024	1-216-025-91	RES-CHIP 100 5% 1/10W	
R025	1-216-025-91	RES-CHIP 100 5% 1/10W	
R026	1-216-025-91	RES-CHIP 100 5% 1/10W	
R029	1-216-073-00	RES-CHIP 10K 5% 1/10W	

N

REF.NO.	PART NO.	DESCRIPTION			REMARK
R030	1-216-049-91	RES-CHIP	1K	5%	1/10W
R031	1-216-669-11	METAL CHIP	5.6K	0.5%	1/10W
R032	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W
R034	1-216-049-91	RES-CHIP	1K	5%	1/10W
R035	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R036	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R037	1-216-073-00	RES-CHIP	10K	5%	1/10W
R039	1-216-025-91	RES-CHIP	100	5%	1/10W
R040	1-216-025-91	RES-CHIP	100	5%	1/10W
R042	1-216-073-00	RES-CHIP	10K	5%	1/10W
R043	1-216-049-91	RES-CHIP	1K	5%	1/10W
R044	1-216-657-11	METAL CHIP	1.8K	0.5%	1/10W
R045	1-216-049-91	RES-CHIP	1K	5%	1/10W
R047	1-216-049-91	RES-CHIP	1K	5%	1/10W
R048	1-216-049-91	RES-CHIP	1K	5%	1/10W
R049	1-216-073-00	RES-CHIP	10K	5%	1/10W
R050	1-216-089-91	RES-CHIP	47K	5%	1/10W
R051	1-216-077-91	RES-CHIP	15K	5%	1/10W
R052	1-216-077-91	RES-CHIP	15K	5%	1/10W
R053	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R054	1-216-077-91	RES-CHIP	15K	5%	1/10W
R055	1-216-077-91	RES-CHIP	15K	5%	1/10W
R056	1-216-073-00	RES-CHIP	10K	5%	1/10W
R057	1-216-073-00	RES-CHIP	10K	5%	1/10W
R058	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R059	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R060	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R061	1-216-049-91	RES-CHIP	1K	5%	1/10W
R062	1-216-613-11	METAL CHIP	27	0.5%	1/10W
R063	1-216-613-11	METAL CHIP	27	0.5%	1/10W
R064	1-216-613-11	METAL CHIP	27	0.5%	1/10W
R066	1-216-049-91	RES-CHIP	1K	5%	1/10W
R067	1-216-073-00	RES-CHIP	10K	5%	1/10W
R075	1-215-407-00	METAL	270	1%	1/4W
R076	1-215-407-00	METAL	270	1%	1/4W
R077	1-216-073-00	RES-CHIP	10K	5%	1/10W
R078	1-216-121-91	RES-CHIP	1M	5%	1/10W
R079	1-216-295-91	SHORT	0		
R080	1-216-295-91	SHORT	0		
R081	1-216-049-91	RES-CHIP	1K	5%	1/10W
R082	1-216-049-91	RES-CHIP	1K	5%	1/10W
R084	1-216-073-00	RES-CHIP	10K	5%	1/10W
R085	1-216-049-91	RES-CHIP	1K	5%	1/10W
R086	1-216-049-91	RES-CHIP	1K	5%	1/10W
R090	1-216-073-00	RES-CHIP	10K	5%	1/10W
R091	1-216-049-91	RES-CHIP	1K	5%	1/10W
R092	1-216-049-91	RES-CHIP	1K	5%	1/10W
R093	1-216-049-91	RES-CHIP	1K	5%	1/10W
R094	1-216-049-91	RES-CHIP	1K	5%	1/10W
R095	1-216-049-91	RES-CHIP	1K	5%	1/10W
R096	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R097	1-216-073-00	RES-CHIP	10K	5%	1/10W
R098	1-216-073-00	RES-CHIP	10K	5%	1/10W
R099	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1001	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1002	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1003	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1004	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1005	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1006	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1007	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1008	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W
R1009	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1010	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1011	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1012	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1013	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1014	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1015	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1016	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1017	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1018	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1019	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1020	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1021	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1022	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R1023	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R1024	1-216-681-11	METAL CHIP	18K	0.5%	1/10W
R1025	1-216-025-91	RES-CHIP	100	5%	1/10W
R1026	1-216-109-00	RES-CHIP	330K	5%	1/10W
R1027	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R1028	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R1029	1-216-025-91	RES-CHIP	100	5%	1/10W
R1030	1-216-025-91	RES-CHIP	100	5%	1/10W
R1031	1-216-025-91	RES-CHIP	100	5%	1/10W
R1032	1-216-025-91	RES-CHIP	100	5%	1/10W
R1033	1-216-025-91	RES-CHIP	100	5%	1/10W
R1034	1-216-025-91	RES-CHIP	100	5%	1/10W
R1035	1-216-025-91	RES-CHIP	100	5%	1/10W
R1036	1-216-025-91	RES-CHIP	100	5%	1/10W
R1037	1-216-025-91	RES-CHIP	100	5%	1/10W
R1038	1-216-025-91	RES-CHIP	100	5%	1/10W
R1039	1-216-025-91	RES-CHIP	100	5%	1/10W
R1040	1-216-025-91	RES-CHIP	100	5%	1/10W
R1041	1-216-025-91	RES-CHIP	100	5%	1/10W
R1042	1-216-025-91	RES-CHIP	100	5%	1/10W
R1043	1-216-025-91	RES-CHIP	100	5%	1/10W
R1044	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W
R1045	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1047	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1049	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1050	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1051	1-216-097-91	RES-CHIP	100K	5%	1/10W
R1052	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1053	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1054	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1055	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1056	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1057	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1058	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1059	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1061	1-216-073-00	RES-CHIP	10K	5%	1/10W

N

REF.NO.	PART NO.	DESCRIPTION			REMARK
R1062	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1063	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1064	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1065	1-216-125-00	RES-CHIP	1.5M	5%	1/10W
R1066	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1067	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1068	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1069	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1070	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1071	1-216-081-00	RES-CHIP	22K	5%	1/10W
R5003	1-216-295-91	SHORT	0		
R5005	1-216-081-00	RES-CHIP	22K	5%	1/10W
R5006	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5007	1-216-049-91	RES-CHIP	1K	5%	1/10W
R5010	1-216-295-91	SHORT	0		
R5011	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5015	1-216-049-91	RES-CHIP	1K	5%	1/10W
R5108	1-216-308-00	RES-CHIP	4.7	5%	1/10W
R5109	1-216-308-00	RES-CHIP	4.7	5%	1/10W
R5110	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5113	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5115	1-215-859-00	METAL OXIDE	22	5%	1W F
R5116	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5119	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5122	1-215-859-00	METAL OXIDE	22	5%	1W F
R5205	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5206	1-215-859-00	METAL OXIDE	22	5%	1W F
R5207	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5208	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R5209	1-216-308-00	RES-CHIP	4.7	5%	1/10W
R5308	1-216-308-00	RES-CHIP	4.7	5%	1/10W
R5309	1-216-308-00	RES-CHIP	4.7	5%	1/10W
R5310	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5313	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5315	1-215-859-00	METAL OXIDE	22	5%	1W F
R5316	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5319	1-216-073-00	RES-CHIP	10K	5%	1/10W
R5322	1-215-859-00	METAL OXIDE	22	5%	1W F
R5406	1-216-083-00	RES-CHIP	27K	5%	1/10W
R5407	1-216-085-00	RES-CHIP	33K	5%	1/10W
R5408	1-216-308-00	RES-CHIP	4.7	5%	1/10W
R5409	1-216-308-00	RES-CHIP	4.7	5%	1/10W
R5410	1-216-081-00	RES-CHIP	22K	5%	1/10W
R5413	1-216-097-91	RES-CHIP	100K	5%	1/10W
R5415	1-215-887-00	METAL OXIDE	150	5%	2W F
R5416	1-216-081-00	RES-CHIP	22K	5%	1/10W
R5419	1-216-097-91	RES-CHIP	100K	5%	1/10W
R5422	1-216-451-11	METAL OXIDE	120	5%	2W F
R5502	1-216-081-00	RES-CHIP	22K	5%	1/10W
R5503	1-216-081-00	RES-CHIP	22K	5%	1/10W
R5504	1-216-089-91	RES-CHIP	47K	5%	1/10W
R5505	1-216-089-91	RES-CHIP	47K	5%	1/10W
R5506	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R5507	1-249-382-11	CARBON	1.2	5%	1/4W F
R5508	1-249-382-11	CARBON	1.2	5%	1/4W F
R5509	1-249-382-11	CARBON	1.2	5%	1/4W F
R5510	1-249-382-11	CARBON	1.2	5%	1/4W F
R5602	1-216-081-00	RES-CHIP	22K	5%	1/10W
R5603	1-216-077-91	RES-CHIP	15K	5%	1/10W
R5604	1-216-081-00	RES-CHIP	22K	5%	1/10W
R5605	1-216-097-91	RES-CHIP	100K	5%	1/10W
R5607	1-215-862-11	METAL OXIDE	68	5%	1W F
R5610	1-216-308-00	RES-CHIP	4.7	5%	1/10W

<CRYSTAL>

X001	1-760-682-21	VIBRATOR, CRYSTAL (24.756MHz)

MCM-21T2

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